EQUITABLE ACCESS TO LIFE-SAVING CHILD HEALTH CARE: AN EQUITY LENS FOR ETHIOPIA

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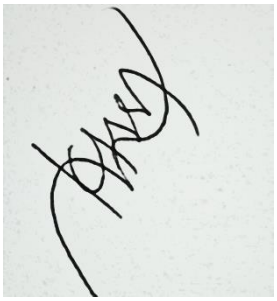
DECLARATION

I declare that **EQUITABLE ACCESS TO LIFE-SAVING CHILD HEALTH CARE: AN EQUITY LENS FOR ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.



15 August,2017

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EQUITABLE ACCESS TO LIFE-SAVING CHILD HEALTH CARE: AN EQUITY LENS FOR ETHIOPIA

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ABSTRACT

Ethiopia has two stories to tell: a fast progress and unfair distribution of the gains in child health care. Despite Ethiopia's achievement in meeting MDG4, wealth-related mortality inequality increased by 1.5 for every 1,000 live births between 2000 and 2011. Two major dividing lines contribute to child health inequality in Ethiopia: place of residence and wealth status. Lack of proper studies on health inequality policy making is affecting the comprehensiveness and quality of inequality reduction in Ethiopia.

This study wished to assess child health inequality and policy factors that affect progress in inequality reduction. Accordingly, the study explored policy-makers' attitude and interest; policy contents, and institutions to make recommendations that promote child health equity in Ethiopia.

The research is mainly a qualitative policy research. Conducted between 2013 and 2017, it was design based on health policy researching and health inequality theories. The researcher conducted semi-structured interviews among health policy makers; policy analysis; and a review of the literature. Twenty policy-makers, 15 policy documents, over 350 literatures were selected through purposing and theoretical open sampling methods. Data was synthesised and analysed with ATLAS.ti 7.1.4 through applying the tools of critical interpretive synthesis and ground theory.

The study found that Ethiopia is in an early state of recognizing and intervening against health inequalities. The quality and level of knowledge is mixed and gets reduced as one goes far from the centre. Consensus is still growing on the major underlying causes of child health inequalities in Ethiopia. Most of the policy makers focus on down-stream factors than broader determinants of health. Wealth inequality is less discussed and intervened than geographical inequalities.

The production of a new Plan of Action can helped to resolve the challenges of lack of detailed approaches that can help reduce the gap in Ethiopia. However, the content of the health policy documents is not comprehensive and based on global lessons. Policy makers from the central government in Ethiopia tend to reject the use of redistribute justice intervention as policy options. There were multiple reasons including: fear of sustainability, ethics and effectiveness were used to reject these interventions. However, leaders from DRS and DPs broadly support the proper adaption of these interventions.

The recent surge of interest to address health inequalities is mainly led by small groups from the top leaders. The engagement of the middle level leaders, Developing Regional States (DRSs), civil society and development partners has been limited. The relation between different institutes is very important in the Ethiopian federal state to reduce inequality.

Without an improved level of awareness; change in attitude; broader engagement of citizens; use of independent data source and review of resource distribution Ethiopia's progress towards Universal Health Coverage in 2030 could get delayed.

Finally, this research provided a list of recommend interventions that Ethiopia might take in its plan, to narrow down health inequalities among children by 2030.

KEY WORDS

Health inequality; equity; health policy; child health; Ethiopia; equity interventions; health policy research; guideline; universal health coverage.

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Dedication

To the world's poorest, the most marginalised and all those feel sad about it.

It is particularly dedicated to the beautiful kids that are sick and not playing but their families cannot afford to get a functional health system.

This work may inspire influencers to provide health care for all irrespective of ethnicity, race, sexual orientation, wealth and other factors.

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LIST OF ABBREVIATIONS

ANC	Antenatal Care
APHRC	African Population and Health Research Centre
BCC	Behavioural Changing Communication
CCT	Conditional Cash Transfer
CHERG	Child Health Epidemiology Reference Group
CI	Concentration index
CIS	Critical Interpretative Synthesis
CMR	Child Mortality Rate
CPR	Contraceptive Prevalence Rate
DALY	Disability adjusted life years
DHS	Demographic Health Survey
DP	Development Partners
DPT3	Diphtheria Pertussis and Tetanus
DRS	Developing regional states
DSHSS	Director of Special Health System Strengthening
EDHS	Ethiopian Demographic and Health Survey
EmOC	Emergency obstetric care
EPA	Equity Plan of Action
EPRDF	Ethiopian People's Revolutionary Democratic Front
ES	Economic Strengthening
FDRE	Federal Democratic Republic of Ethiopia
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
GT	Grounded Theory
HC	Health Centre
HDI	Human Development Index
HEF	Health Equity Fund
HEP	Health Extension Program
HiA	Health in All
HIA	Health Insurance Agency
HiAP	Health-in-All Polices
HIC	High Income Countries
HMIS	Health Management Information System
HPR	Health Policy Researching
HR	Human Resource
HSDP	Health Sector Development Plan

HSTP	Health Sector Transformation Plan
LMIC	Low and Middle-Income Countries
MDG	Millennium Development Goals
MEDHS	Min-Ethiopian Demographic Health Survey
MICS	Multiple Indicator Survey
MOH	Ministry of Health
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCV	Pneumococcal vaccine
PFSA	Pharmaceutical Funds and Supply Agency
PHC	Primary Health Care
PSNP	Productive Safety Net Program
PTF	Policy Triangle Frameworks
QALY	Quality adjusted life years
RAF	Resource allocation formula
RHB	Regional Health Bureau
SA	South Africa
SBA	Skilled birth attendance
SDG	Sustainable Development Goals
SDH	Social determinants of health
SSA	Sub-Saharan Africa
SSI	Semi-Structured Interviews
TB	Tuberculosis
UHC	Universal Health Coverage
UN	United Nations
UNDP	United Nations Development Program
UNECA	United Nations Economic Commission for Africa
Unicef	United Nations Children’s Fund
Unisa	University of South Africa
VAC	Vitamin-A Supplementation Coverage
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

This chapter outlines the background to the research problem; its purpose, theoretical grounding, research design and methodology of the study. Ethiopia has two stories to tell: fast progress and unfair distribution of the gains. It has met the Millennium Development Goals (MDGs) in child mortality but mortality disparity has remained the same or worsened (Ayele & Zewotir 2016:03). It recorded impressive gains in the Human Development Index (HDI), but with concerning disparities among different states (United Nations Development Program [UNDP] 2015: 55).

The poorest and most marginalised communities face lower health and survival in many countries. The gradient of health disparity generally follows the same pattern of socio-economic status and material deprivation. The situations in which people are born, live and work, and their social position affect this gradient (Balaj, McNamara, Eikemo & Bambra 2017:110-112; Braveman, Egerter & Williams 2011:381). The World Health Organization (WHO 2013a) describes disparities in health status as health inequalities.

Unlike *health inequality*, there is no consensus on a single definition of *health inequi*ty. Health inequity has been referred to as preventable disparities in health that should have been avoided (Maden 2016:2). Such disparities mainly arise from socio-economic differences that affect determinants of health (Jayasinghe 2015:2). Often, inequality is observed between the poor and the better-off or among members of different ethnic groups living in the same country. Inequality has also been recorded among different countries. A considerable level of health inequality has been reported, in 2012, among and between 53-member countries of the European Union (Marmot, Allen, Bell, Bloomer, Goldblatt & Consortium for the European Review of Social Determinants of Health and the Health Divide 2012:1015).

The world has succeeded in improving child health and health care, but not uniformly. Between 1990 and 2010 the worldwide neonatal mortality rate fell from 36 to 19 deaths

per 1,000 live births and the number of newborn babies who died within the first 28 days of life declined from 5.1 million to 2.7 million (Hill, You, Inoue, Oestergaard & Technical Advisory Group of United Nations Inter-Agency Group for Child Mortality Estimation 2012: e1001303; Wardlaw, Salama, Brocklehurst, Chopra & Mason 2010:872). Despite of this progress, the reduction was not enough to meet the MDGs in many low and middle-income countries (LMICs). The mortality rate in Sub-Saharan Africa (SSA) remains high. With an average annual rate of 4.2%, the SSA's reduction rate in child mortality falls below the global rate, between 2005 and 2013 (Alkema, New, Pedersen, You & UN Inter-Agency Group for Child Mortality Estimation and Technical Advisory Group 2014:105).

Inequality in Mortality and morbidity rates are also high in Africa. A study in to 28 SSA countries confirms child health mortality variations and inequalities persist among and within African countries (Burke, Heft-Neal & Bendavid 2016: e939). In Zambia, wealth inequality in stunting rate got worse between 2007 and 2014. A pro rich Concentration Index (CI) -0.064 inequalities of prevalence in fever was reported among children in 2014, while no wealth inequality was detected on fever in 2007 (Hangoma, Aakvik & Robberstad 2017:11)

Moreover, Sub-Saharan Africa remains burdened with child health services coverage inequality. In an analysis of inequality in child health service among 28 countries in Sub-Saharan Africa, Hosseinpoor, Victora, Bergen, Barros and Boerma (2011:882) found that 26 of them had a high pro-rich inequality in service provision. Inequality alone contributed 25% of the gap that prevented Sub-Saharan countries from achieving universal coverage of child health services (Hosseinpoor et al 2011:884).

This study focused on child health inequality in Ethiopia. Ethiopia, like many African countries, has a high burden of child mortality and inequality. With about 192,000 children dying every year, Ethiopia is among the top 10 countries with the highest mortality burden. In 2013, the national child mortality rate was 64 per 1,000 live births, which was higher than the global average (UNICEF 2014:18). In 2003, it was among the top 5 countries with 50% of the total global death of children (Black, Morris & Bryce 2003:2226). By 2015, Ethiopia had reduced the 1990 child mortality level by 69%, faster than the global average of 49%. It has also met the MDG goal set for child mortality reduction (Alebachew, Hatt & Kukla 2014:1). While Ethiopia met the MDG goals, the

national average has probably masked the huge variation in the country (Thomsen, Hoa, Målqvist, Sanneving, Saxena, Tana, Yuan & Byass 2011:176).

The effects of inequality are multiple. Based on the lessons from the MDGs progress, universal health coverage has a key role in achieving the Sustainable Development Goals (SDGs) (Tangcharoensathien, Mills & Palu 2015:1, 5). Without addressing the gross inequity in mortality among children under five, countries like Ethiopia will not be able to improve the health and life expectancy of their people by meeting the national and global targets (Ruhago, Ngalesoni & Norheim 2012:1119; Tangcharoensathien et al 2015:5).

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Ethiopia generally provides a story of progress, but unevenly distributed. It is becoming increasingly divided. The UNDP Health Development Index (HDI) (2015) reported a 50% growth in HDI in Ethiopia, Rwanda and other fast progressing countries (UNDP 2015:58). This figure did not reflect how few urban areas and selected regions had a high or fast improving HDI compared with other parts of Ethiopia.

Despite meeting the MDG goal, the situation of child health inequality has remained the same or worsened. In their study on understanding inequalities in child health in Ethiopia, Skaftun, Ali and Norheim (2014:01) found that health achievements improved between 2000 and 2011, but inequalities remained high. There are two major lines of division in child health status: place of residence and wealth status (Memirie, Verguet, Norheim, Levin & Johansson 2016:1). While these divisions overlap, place of residence has two dimensions: urban versus rural and “central” versus “peripheral or the Developing Regional States” (Memirie et al 2016:2).

The child health situation of the poorest of the poor and residents in the peripheries is becoming relatively worse compared with other Ethiopians (McKinnon et al 2014: e165). Under-five children from the lowest wealth quintile group have a 1.6 times higher risk of dying than those in the highest wealth quintile. Living in the peripheries also known as the “Developing Regional States (DRS)” poses a five times higher risk of death to children compared to living in other regions (Central Statistics Agency [CSA] and ICF International 2012:110). Addis Ababa had the lowest U5 MR of 53/1,000, while

Benishangul Gumuz and Afar regions have the highest rate of 169 and 127/1,000, respectively. The lowest wealth quintile group had the highest child mortality rate of 137 per 1,000 live births, compared with 86 per 1,000 live births among the highest wealth quintile (CSA 2012 & ICF International: 112).

Inequalities in access to and utilization of health care services are also high. Cited in Alkenbrack, Chaitkin and Zeng (2015:11) Ethiopia had one of the highest inequalities in skilled delivery, compared to twenty-two other African countries. In a retrospective review of surveys from 54 countries, Ethiopia had one of the highest levels of socio-economic inequalities of mortality and coverage of child health-related medical services (Barros, Ronsmans, Axelson, Loaiza, Bertoldi, Franca, Bryce, Boerma & Victora, CG 2012:1230).

Similarity, Memirie et al (2016:4) found high inequalities in utilisation of maternal and child health services in Ethiopia and emphasised the role of primary health care (PHC). Ottersen, Norheim and World Health Organization Consultative Group on Equity and Universal Health Coverage (2014:389) found that Ethiopia, Rwanda, India, Cambodia and Vietnam had high rates of inequality in child and reproductive services coverage. The use of child health care services among the poorest residents in the DRS and rural Ethiopia is lower than the rest of the country. In 2011, only 16% of the poorest children with pneumonia sought treatment, while treatment reached 62% among the richest.

Ultimately, the policy and programmatic response was not sufficient to reduce child health inequality in Ethiopia. The policy and the bureaucratic machineries designed for MDGs could not help to reduce inequalities as required (Ayele & Zewotir 2016:03-05). Recently, Ethiopia has made a move to change its policy priority towards equity after a lack of focus and strategies on reduction of inequalities between 1995 and 2014 (Federal Ministry of Health [FMOH] 2015:1). For the government and the people in Ethiopia, who are committed to reducing the long-standing unfairness, failure to reduce inequity in terms of survival is a major challenge.

Against this background, the researcher wished to develop an informed ‘guide’ that could assist an expedited reduction of child health inequalities in Ethiopia.

1.2.1 Ethiopia and its diversity

The Federal Democratic Republic of Ethiopia (FDRE) is a diverse and ancient independent African country. It is the second most populous country in the Sub-Saharan region with an estimated population of 99,391,000, with a life expectancy of 67 years for women and 63 years for men (WHO 2015a). Ethiopia has more than 80 native ethnic groups. The current state, which was formed in the 19th century, has been ruled exclusively by two dominant ethnic groups.

1.2.2 Government

Ethiopia was originally a feudalist empire, which was replaced by a socialist rule in the 1970s. The socialist regime was overthrown through armed struggle led by the rural population and certain ethnic groups (Legum & Lee 1977:20). The current government that replaced the socialist state is working towards democratisation and an open market.

Ethiopia is currently divided into two city administrations and nine major regional states based on their ethnic and geo-cultural factors. The regional states are: Tigray, Afar, Amhara, Oromia, Southern Nations and Nationalities, Harari, Benishangul Gumuz, Somali and Gambella. The last three regional states are called Developing Regional States (DRS) or the “peripheries”. These regions were particularly “established” after 1991 and are populated by what were called “minority” ethnic groups. Indigenous populations in the DRS areas have long been marginalised from public services and good governance. Public services systems, particularly regional government and sector offices, were established after 1991 in DRSs. However, there were social service provider facilities in the DRS areas, although with a low coverage and under a different administrative arrangements.

1.2.3 Economy

Ethiopia is listed among the low-income countries, with a Gross Domestic Product (GDP) per capita in Purchasing Power Parity of $1,336. The economy is largely dependent on agriculture, which contributes up to 50% of the annual income of GDP. For the past ten years, consecutive positive economic growth with an average of 8-10%

per year was recorded. This might have started to widen the gap between different socio-economic strata. By the end of 2014, the country was ranked 174th on the Human Development Index (UNDP 2015:210).

The researcher found little literature available on health inequality/inequity in general and child survival inequity in Ethiopia. Although a growing number of researchers describe the situation based on EDHS data, the effect of heath policy and policy makers on the progress of inequality is still unexplored. Routine death and birth registrations are not regularly recorded and the EDHS is the only reliable source of national and regional level data.

The Ethiopian *Health Sector Development Plan (HSDP), 2011-2014* made child health a top priority, but there is no clear action plan or strategy to reduce the child health inequality (Federal Ministry of Health [FMOH] 2011). The new health sector strategy, the *Health Sector Transformation Plan (HSTP), 2016-2020* (FMOH 2015:10, 14) introduces a health inequality reduction vision, yet does not outline major strategies to reduce child and other health inequalities in Ethiopia.

1.2.4 Source of the research problem

The researcher is a senior public health professional who has first-hand exposure to data and policy dialogues at national level. Every year the Ethiopian government reviews its progress at the level of coverage of essential health services. The data for this review is disaggregated by place of residence. Persistent high degrees of disparities in coverage of services were identified and discussed. This disparity in reported coverage of life-saving services was interpreted as a mere variation in performance by different regions.

A lack of understanding of the policy and structural factors that prevent Ethiopia from directly focusing on equity reduction aroused the researcher's interest. The researcher's observations raised the question in his mind of "how Ethiopia could ensure that all children achieved the best attainable health fairly?" His daily experience and observations motivated the researcher to undertake this study.

1.4 PROBLEM STATEMENT

Ethiopia's progress in child health inequality reduction has stalled or got deteriorated. In an analysis of socio-economic inequality in neonatal mortality in low- and middle-income countries, McKinnon, Harper, Kaufman and Bergevin (2014: e165) found that the neonatal mortality rate worsened among the poorest groups in Ethiopia between 2000 and 2011. Despite the growth in literatures that describe child health inequality in Ethiopia, the current policy and programmes do not directly recognize and address inequality with tailored interventions (Barros and et al, 2012; Skaftun, Ali and Norheim, 2014:01; Memirie, Verguet, Norheim, et al.,2016: 04). Further studies are required to understand the policy setting and implementation bottlenecks that are hindering the progress against an expedite reduction of inequality.

The growing or not improving inequality reflects on the quality of the policy and investments that Ethiopia made in the last 20 years. Despite the presence of data on child mortality and other health indicators variation, the health system and the current policy do not directly recognise the inequality and address it with tailored interventions.

Ethiopia has a political imperative to rapidly reduce health and broader social inequalities. Health inequality and violation of human rights are interrelated (Braveman 2010:31). Ethiopia is a signatory to the UN Human Rights Charter, which includes the right to the highest attainable standard of health and life-saving services. The current highest attainable standard in child health is being received by certain groups of the society, leaving behind some groups of the population (Skaftun, Ali & Norheim 2014:01). Lack of the proper policy and resources affect countries' capacity to distribute the best attainable health fairly.

Ethiopia is working towards Universal Health Care by 2030 (UHC 2030), but the tools and strategies have not been outlined. The Federal Ministry of Health (FMOH) is developing multiple documents and strategies to address health inequalities directly, but lack of proper studies on policy making and health inequality is affecting their comprehensiveness and quality. Knowledge, perception, the need to be politically correct and the influence of interest groups can affect the quality of these responses.

Finally, the researcher found scant studies conducted in Ethiopia and Africa that applied tested frameworks to support the health sector's policy setting and implementation process in terms of promoting equity. The attitude, knowledge, political drives, interest groups and institutional dynamics in health equity policy setting and execution has yet been unexplored in Ethiopia. Without addressing these issues, the right kind of policy choice and implementation cannot be attained. The level of perception among health sector policy makers and programme managers of this variation in Ethiopia has not been researched. Moreover, the current method of functioning by the health policy and system has not been reviewed from a perspective of equity and child health.

Against this background the researcher conducted the study to assist in facilitating child health inequality reduction in Ethiopia. The findings should reveal the main policy and health systems factors that can affect inequality reduction in Ethiopia. The guide was built on theoretical frameworks and global best practices. This study should contribute to the ongoing policy dialogues and equity reduction strategies of the new health sector program for 2016-2020 and UHC 2030 in Ethiopia and similar contexts.

1.5 AIM OF THE STUDY

The purpose and objectives are discussed under this heading:

1.5.1 Purpose of the study

The purpose of the study was to contribute to the reduction of child health inequity in Ethiopia, through a consideration of global best practices and exploration of the contemporary policy making and implementation process. The outcome of the study was to develop a guide that facilitates reduction of child health inequality in Ethiopia, along with an empirical description of the factors that affect the existing status quo.

1.5.2 Objectives

In order to achieve the purpose, the objectives of the study were to

- identify policy-makers' attitude and interest that affect policy setting and implementation against a steady reduction in child health inequality in Ethiopia

- analyse institutional and motivational factors that affect the adoption and implementation of equitable child health care services
- develop an informed guide that could provide alternatives for an accelerated steady reduction of the major socio-economic child inequalities in Ethiopia

Accordingly, the researcher conducted a critical interpretative synthesis of existing policy; examined primary data, and reviewed literature on child health inequality. Primary data was collected and analysed to reveal the perceptions, attitudes, policy choice, interest groups, and the relations of policy makers and relevant institutes.

1.6 SIGNIFICANCE OF THE STUDY

The researcher wished to produce evidence on health policy and its effect on health inequalities in Ethiopia and Africa. The findings indicate how inequity and its effects on child health are perceived in Ethiopia among the current health programme leaders, and how and why policy makers take decisions that affect health inequality. The recommendations can be used as a basis for advocacy and monitoring of Ethiopia's response to universal health care and equity reduction by 2030.

The findings should add to the ongoing policy dialogue on health inequality reduction and serve as an input to policy documents associated with the new health sector strategic plan. The new Strategic Plan will cover the period of 2016-2021. Moreover, the study should help facilitate local and global discussion of Sustainable Development Goals (SDGs) agendas that focus on universal coverage rather than national level improvements in health.

Finally, the mix of theories applied and the technical approach of synthesising interviews, policy analysis and literature review make the study leading in Africa. Future similar studies can build on this model.

1.7 THEORETICAL GROUNDING

Limited relevant theories have been developed and tested to analyse health equity and policy problems in Africa (Chu, Jayaraman, Kyamanywa & Ntakiyiruta 2014:1-2). This study was based on two main streams of theories, namely Health Policy Researching

(HPR) and health inequality streams. The use of health policy assessment tools to understand equity in health is developing but crucial (Embrett & Randall 2014:145-155).

A combination of 3-i theory, Kingdon's multiple stream theory, and the Policy Triangle Framework was applied to research policy. Similarly, a combination of Social Determinants of Health and Sen's capability theory of health inequalities was used to understand how inequalities work. These theories are discussed in detail in chapter 2.

1.7.1 Health policy analysis theories

Selected health policy analysis theories and frameworks were applied. The study explored policy-related factors that influence child health equity, therefore suggesting interventions for future policy-making processes in Ethiopia. The focus of policy analysis has moved from the analysis of technical content to understanding what underlying factors are required to 'get' the right policy at the right time (Walt, Shiffman, Schneider, Murray, Brugha & Gilson 2008:308-310).

Accordingly, the study was based on the interest, idea and institution (3-i) theory of Health Policy Research (HPR). The '3-i' theory helps to understand the level of knowledge, understanding and attitude ('idea') policy makers have as well as what kind of 'interest' groups there are that affect policy setting or implementation of specific issues. The last component 'institution' deals with the type of institutions that are stakeholders and affect the policy process of agenda setting and implementation (Pomey, Morgan, Church, Forest, Lavis, McIntosh, Smith, Petrela, Martin & Dobson 2010:709-710). This study primarily examined the knowledge and attitude of policy makers, the political interest, the driving factors and the intricate relations of the federal and central government in making and implementing health equity-related policies.

In addition, Kingdon's multiple stream theory and the Policy Triangle Framework complemented the 3-i theory in this study. Kingdon's theory breaks down the policy setting process into problem, policy and politics. It argues that identifying the right problem, the right policy choice, and political support are required to move an agenda and start intervening. The Policy Triangle Framework involves the study of policy content, context, and the process of policy making.

Using these theories, the researcher constructed one stream of HPR framework for the study. The ultimate design was mainly based on analysis of the interaction between knowledge and attitude, interest groups, institutional relations, and policy content in Ethiopia. The researcher found that “idea”, “policy” and “policy content” in the three frameworks were complementary; “institutions” and “context” shared the same concepts, and “interest” and “politics” were complementary.

1.7.2 Health equity theories

The main variables investigated in understanding child health and child health inequality were derived from theories of health inequality/inequity (Chu et al 2014:1-4). This section briefly discusses understanding inequity, social determinants of health theory, Rawl’s theory of justice, and Sen’s capability approach.

1.7.2.1 Understanding inequity

Equity has consistently remained of concern. The main theoretical foundation of this study was based on socio-economic determinants of health, which are avoidably established by unfair social structures, institutions and groups.

The communist view of equity holds that inequalities are created socially and there are two main social groups: employers and employees (Boomier & Stecklov 2010:501-502). Employers own economic production tools like factories, land or similar powers, and employees live serving these groups. Boomier and Stecklov (2010:503) point out that this view is limited. It is generally agreed that health inequity should be avoidable and reduced considerably (Eckersley 2015:122-123). Moreover, the current global situation has created multiple social groups. Eckersley (2015:122-123) emphasises that to get beyond inequality requires acknowledging the complexity of social determinants of health.

1.7.2.2 Social determinants of health theory

Socio-economic factors interact with biological and environmental factors to determine people’s health. In 2008, the World Health Organization’s Commission on Social Determinants (CSHD) highlighted the need to address social and broader factors to

improve health (Commission on Social Determinants [CSDH] 2008:40). The CSDH found that political, social and environmental factors affect health and medical conditions. It recommended improving the situations where people are born, live and work; reducing unfair distribution of resources, and tracking inequalities to bring about a broad-based sustainable reduction in health inequality (CSDH 2008:40-50; Braveman, Egerter & Williams 2011:381-383).

Social determinants of health (SDH) include factors generated by the environment, in which people are born and live which influence the outcome of health. These determinants are shaped and created by social policies (including health policies), social status, and economic and political factors. Unequal distribution of these factors can lead to health inequity (Marmot, Friel, Bell Houweling & Taylor 2008:1661-1663; Graham 2007:100-104). The question of a close relationship between wealth and health inequalities, and addressing income inequality to resolve health inequality is still debated (Eckersley 2015:124).

1.7.2.3 Rawl's theory of justice

In 1990, Rawl maintained that equal access to basic freedom, right and power guarantees equity among citizens of the same country (Graham 2007:11). According to Rawl, social goods, which are distributed based on social structure and interaction, should be distributed fairly to attain equity. Creating the opportunity for education, election and basic freedom can create a just society, where health inequalities/inequities are minimised.

Rawl's theory did not equate equity with health equity and inequality. Boomier and Stecklov (2010:503), however, linked social goods with socioeconomic determinants for health and included access to health care as a social good.

1.7.2.4 Sen's capability theory

In Japan, Sen was concerned with health equity and in 1999 formulated the theory of capability (Oshio & Kan 2014:128). Sen focused not on what people have as a good, but fairness factors that determine what people aspire to be based on their respective values. According to Sen (2004:120), fair access to basic social goods is a limited

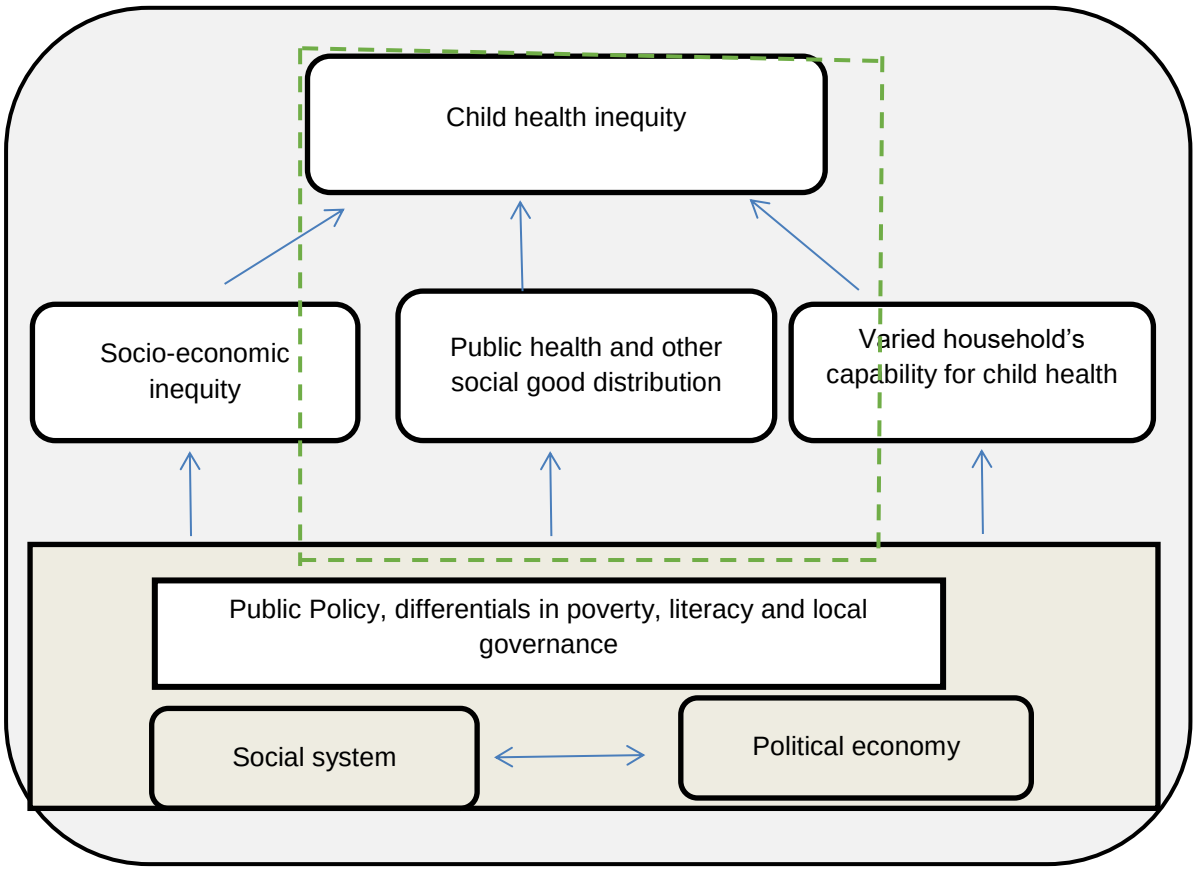
recipe for ensuring equity because not all people with equal access to social good, in this case health care, will have equitable health. Sen put health at the centre of unleashing human capability. Consequently, reducing health equity could be achieved through creating broader opportunities for people to take control of factors that affect their health. Chapter 6 discusses and applies Sen's theory further and makes recommendations to invest more in empowering communities and providing demand-side incentives to support communities to take control of broader factors.

1.8 CONCEPTUAL FRAMEWORK

The conceptual framework of this study was based on social determinants of health theory, whereby social and economic status among different groups of populations determine the grade and pattern of health inequity (CSDH 2008:40-50). These groups are primarily formed through long-term marginalisation, including social policies and subsequent unfair distribution of opportunities for better health.

The study explored child mortality, morbidity and child health care service coverage. People's capability to have a healthy pregnancy, safe delivery and access to life-saving child care is largely determined by the parents' and grandparents' social position. In addition, health service institutions determine the availability of affordable quality maternal and neonatal health care through policy. The study explored how health programme leaders' perceptions and actions created equity or perpetuated the existing health inequity through unfair distribution of preventive and curative medical services.
The study did not directly explore how and why social groups are formed and sustained or what shaped Ethiopia's current political economy.

Figure 1.1 presents the conceptual framework for the study. Overarching underlying factors like the country's social systems and political economy were not examined in the study.



Key areas directly targeted by this study

Figure 1.1 Conceptual framework of the study

1.9 RESEARCH DESIGN AND METHODOLOGY

The researcher selected a qualitative research design based on grounded theory and a literature and policy review, and applied Critical Interpretive Synthesis (CIS) to analyse the data (Hunter 2016:920). Grounded theory is frequently used in qualitative research because it has the rigor to describe phenomena and unearth new theories from data (Dahlgren, Emmeline & Winkvist 2004:148; Goldkhul & Cronholm 2010:187-188). Grounded theory assisted the researcher to develop theories on how inequity in child health is accounted and how inequality reduction could be approached (Strauss and Corbin 1998:205). Moreover, the researcher used supplementary quantitative evidence to guide part of the discussions and the development of the guideline. Since there is no consensus on a single definition of equity and inequity, a qualitative approach enabled the researcher to examine the respondents' various perceptions and proposed suggestions to tackle and reduce inequity (Morse 2010:483). Questions to be examined,

for example, included: *Should rural and urban Ethiopians have the same survival rate? Are the current variations avoidable?*

The study was conducted in two phases. Phase 1 was a synthesis of in-depth interviews, policy content and literature analysis to understand the variation in perceptions, practice, existing capacity, and intention of policy makers. Phase 2 developed a guide to facilitate a reduction of child health inequality and mortality inequity in Ethiopia.

Data was collected by means of semi-structured interviews and from the literature review and policy documents. Data analysis and synthesis enabled the researcher to develop and construct a guide to facilitate reduction of child mortality inequity in Ethiopia.

The researcher employed grounded theory that involved the use of supplementary quantitative evidence to guide part of the discussions and the development of the guideline. Grounded theory is frequently used in qualitative research because of its rigor in describing phenomena and developing new theories from qualitative as well as quantitative data (Dahlgren, Emmeline & Winkvist 2004:148). Grounded theory assisted the researcher to inductively generate a theory for the reduction of inequality in child survival and health care (Strauss & Corbin 1998:205).

1.10 SCOPE AND LIMITATIONS OF THE STUDY

The scope of the study was limited to understanding the downstream factors that drive survival and health equity of children in Ethiopia. Urban, rural and intra-regional variations were considered and how health policy and service provision could be improved to reduce them.

The study did not explore the major factors that created different socio-economic groups of Ethiopia or inequality among different religious groups. The study was also limited by a potential “policeman effect” (the tendency to be politically correct) among some respondents.

1.11 DEFINITION OF KEY TERMS

For the purposes of this study, the following terms were used as defined below:

- **Access to health care:** Access refers to “the level of health care services that the system is able to provide to an individual. Access has often been measured by proxy measurements such as the use of health care services depending on the need for care” (Nunez & Chi 2013:3).
- **Developing Regional States (DRS) also referred to as “peripheral regions”:** These are parts of Ethiopia where socio-economic progress and political stability are relatively still developing. These Ethiopian regional states are: Afar, Gambilla, Benishangul-Gumuz and Somali.
- **Health equity:** The study used the WHO (2013) definition of equity in health as “the absence of systematic and potentially remediable differences in one or more aspects of health across socially, demographically, or geographically defined populations or population subgroups” (WHO 2013a).
- **Health inequality:** This study used the WHO definition of health inequality, it is the differences in health status, service up take or in the distribution of health determinants including access to health care (WHO 2016a).
- **Health policy analysis:** Health policy analysis referred to a process, approach, tools or methods used to improve health policy decisions, implementation, and impact (Walt et al 2008:308-309).
- **Health policy:** In this study, health policy referred to written policy, strategic plans, and guidelines developed by the Ethiopian FMOH and regional states to guide general and child health-related service (Burris 2017:130).
- **Neonatal mortality rate:** the probably of a live born neonate may die due to any cause in the first 28 days after birth (UNICEF 2015:30).
- **Policy makers or health sector policy makers:** In this study policy makers referred to individuals or groups that directly affect policy setting and implementation. These individuals could be staff members of central and regional offices of the Ministry of Health or development partners.
- **Risk factors for child mortality:** Factors which have been conclusively identified as causing child death, such as lack of skilled birth attendants, lack of

the appropriate treatment for killer diseases, maternal health status and malnutrition (WHO 2015b).

- **Supply-side bottlenecks:** These are barriers that prevent children and their families or guardians from accessing affordable quality health services, and include health policy and availability of services (Dickson, Simen-Kapeu, Kinney, Huicho, Vesel, Lackritz, De Graft Johnson, Von Xylander, Rafique, Sylla, Mwansambo, Daelmans, Lawn & Lancet Every Newborn Study Group 2014:439).
- **Under-five mortality rate:** The probability that a child will die before his/her fifth birthday. It is usually expressed per 1,000 live births (UNICEF 2015:30).
- **Inequality and inequity:** These terms were used alternatively or interchangeably to refer to unfair disparities of health.

1.12 STRUCTURE OF THE STUDY

The study consists of six chapters:

Chapter 1 Orientation to the study

Chapter 2 Theoretical framework and literature review

Chapter 3 Research design and methodology

Chapter 4 Data analysis and interpretation, and findings

Chapter 5 A guide to reduce child health care inequality

Chapter 6 Conclusion and recommendations

1.13 CONCLUSION

This chapter outlined the research problem, purpose, objectives, theoretical grounding, theoretical framework, and research design and methodology of the study. Key terms were defined and the structure of the study was outlined.

Chapter 2 discusses the theoretical framework and literature review conducted for the study.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

This section presents a systematically analysed content of literature review and an expanded presentation of the theoretical frameworks involved in this study. It provides a broader review of literature on the subject area, and background information about Ethiopia. Along broad set of information, specific description of the situation of child health inequality in Ethiopia is presented.

2.2 HEALTH INEQUALITY AND EQUITY

Health, a complete state of wellbeing in physical, mental, social and spiritual status of individuals varies from individual to individual. Health status can be objectively measured at individual or group level through: morbidity indicators, disability adjusted life years (DALYs), quality adjusted life years (QALYs), average life span or mortality. Child mortality is taken as one of the proxy indicator to measure the general health status of populations (Ereshefsky 2009:221). Disparity in mortality rate of children under-five years in Ethiopia is the primarily interest indicator of health in this study.

2.2.1 Health Inequality

WHO defines Health inequalities as "*differences in health status or in the distribution of health determinants between different population groups*" (WHO 2016a).

The global status of health varies significantly between countries. The global status of health varies significantly between countries. World Health Statistics in 2016 reported Japanese lived in average 83.7 years, while citizens in Sierra Leon had an average lifespan of 50.1 years (WHO 2016b). In the same year, the State of the World's Children reported that Children born in Angola had 78.5 times higher chance of dying before reaching the age of five as compared with children in Luxemburg (UNIEF 2016:110).

This variation in health status is commonly identified as health inequality. Different communities and political systems opt to give it related but varying names. European countries consider the variation as inequality; United States (US) and some other states call it disparity (Braveman 2012:665). Despite the increased popularity of the words inequality, disparities and equity, clear understanding and definition are not established (Braveman 2014a:5-8). In Ethiopia, official documents at the Federal Ministry of Health (FMOH) do not directly address these variations as either inequity or inequality.

Health inequalities can be horizontal and vertical. Horizontal inequalities are disparities of health conditions or status across different socially constructed group. This can be a variation of child mortality between different regions or economic classes. Being fair in addressing horizontal inequality in health addresses includes providing equal access for equal need, equal utilisation for equal need and equal health care expenditure for equal need (Allanson & Petrie 2014:1390-1396; Macinko & Lima-Costa 2012:2). Vertical inequality represents the variation of health status among individuals and households. For example, this includes a differential of survival among children living in the same households.

2.2.2 Health inequality versus health inequity

There is no single accepted definition of health inequity; the definition of inequity involves normative judgment of unfairness (Asada, Hurley, Norheim & Johri 2015:1-2). The WHO defines health equity as *"the absence of unfair and avoidable or remediable differences in health among populations or groups defined socially, economically, demographically or geographically"* (WHO 2013a). It further tries to simplify health inequities as preventable health inequalities. What are unfair or avoidable remain to be interpreted differently at different settings, variation in interpretation affects the type and quality of intervention to reduced health gaps (Braveman 2014b:366).

Based on the results of this literature review, it sounds like an evolution in definition of health inequality and inequity is happening. This started from early 1990's coining what health inequity is with broad language of subjective interpretations to new debates that are encouraging a sharper definition in mid 2010s. While WHO has broadly maintained its definition from 2008, different schools of thought have continued to evolve. Recently,

there is a new challenge to the concept of what is unavoidable and unfair in the WHO's definition of equity, with which this paper agrees with.

There are two major areas of this thought: an evolution of the social determinants view and the "equal opportunity for health". Under the first thought, Braveman (2014a; Braveman 2014b) continued advocating to target disparities that affect disadvantaged sections as inequity, irrespective of our current capability to prove they are avoidable or not. He urged to reduce inequalities that affect socio-economic groups without reducing health gains of the advantaged group (Braveman 2014a:5-8; Braveman 2014b:366-370).

The equal opportunity group, which the writer believes as a thought that comes out of neoliberal economic and pro-governments views, would like individuals to take some responsibility for lower health conditions they are in. Proportion of Health disparities that have probably been created due to individual's behaviour or life-style should not be accounted as unfair and therefore they don't constitute as inequities. A recent leading work in this one is from a group that analysed mortality data from Netherlands to extrapolate what proportion of inequality in is inequity, after they accounted the responsibility of individuals in the documented inequality (García-Gómez, Schokkaert, Van & Uva 2014:1-30). Norheim and his colleagues attempted to review the two schools of thought establish a similar model to capture factors that are not influenced by policy change and interventions (Asada et al 2015:01-02).

Empirical determination of fairness is ongoing work. On the back of the early works by Fleurbaey and Schokkaer (2008), the equal opportunity group promotes the idea of legitimate and illegitimate causes of health inequity. All factors that are out of control of individuals are takes as illegitimate, or unacceptable. Fleurbaey and Schokkaer, coming from economics background, they considered behaviours that produce unfavourable health as spin offs from choices (Fleurbaey & Schokkaer 2008:73-76). Given the established tested theories and literature on how environmental and ecological factors of policy and socio-economic factors and individual behaviours are linked, the researcher of this paper does not agree with Fleurbaey's simple classification of legitimate and illegitimate inequalities. A less conservative view on this line was taken by other researchers who have taken the same line recently, acknowledging behaviours are not mainly choices made by individuals (Asada et al 2015:5-6). Asada et al (2015)

factored in Age and behaviours as legitimate inequalities or non-inequalities, but accounted the effect of socio-economic factors on behaviour.

The original shift from inequality to equity was introduced in early nineties. Whitehead and Dahelgren, 1991, cited in Norheim and Asda (2009:40) proposed the most widely used definition of health inequity, which shifted the attention to health inequity. They defined it as that are not only unnecessary and avoidable differences in health, but also considered unfair and unjust. Many including Daniel and Rawl, argue that variation in health status or health inequality, given health is a key capacity for human being to enjoy full life and functionality should considered as unfair. Inequity in health further advances socio-economic inequity and puts the situation of already disadvantaged groups worse (Norheim & Asda 2009:42).

Most importantly, Inequity has become an agenda in most of the countries across the globe Europeans, Australia, New eland and US had designed strategies to address health inequities systematically. Literatures show inequities among different class of economic groups in Africa and Europe, while inequities related to race are reported in Australia and US (Braveman 2014b:366-368).

Finally, irrespective of the broader debate on general health inequality, child health inequalities and mortality are broadly seen as inequity. The disparity in coverage and utilisation of life-saving intervention due to socially constructed factors can create disparities in child mortality. In this kind of set-up, childhood mortality inequalities are construed to have an inequity dimension, because most of them could have been avoided and it is unfair to leave behind parts of the remaining (Stephens 2012:464-485).

In this study health inequality and inequity are used interchangeably to represent the notion of child health inequalities in Ethiopia are inequities.

2.3 EQUAL IS NOT ALWAYS EQUITABLE; THE INVERSE EQUITY

The fundamental causes of inequality and health inequality are discussed in Chapter 1. In situations where a chronic social inequality prevails, equal of the same interventions for unequal sub-populations will not create equity for health outcomes. The scale and

introduction of life-saving interventions shall be based on the level of need by different sub-populations than a simple rationing of it for everyone in the population irrespective of their need. Inverse inequality or Inverse Law of Health Care is a concept that argues in unequal populations the health care is distributed inversely to the need of the populations (Pedersen & Vedsted 2014:1-2). Therefore, populations with a lower need will have a higher access to care; the most privileged tends to get services first, before it reaches to the others (Rodeny & Hill 2014:1-2).

Multiple studies have demonstrated the way inverse inequity is working in situations where inequality is not addressed systematically. Victora and colleagues (2012) in their DHS further analysis for 35 countries concluded the use of bed net was inversely inequitable, as it was disproportionally well utilised by the well-off which had a lower risk of dying from malaria (Victora, Barros, Axelson, Bhutta, Chopra, Franca, Kerber, Kirkwood, Newby, Ronsmans & Boerma 2012:1154-1155). A child who has access to a therapeutic care will have a better to preventive care also. Residents in urban areas will have higher access to treatment of pneumonia, unlike those living in rural areas that are unimmunised more vulnerable to get pneumonia (Mulholland, Smith, Carneiro, Becher & Lehmann 2008:401-403).

Child health inequalities grow out of variations in social determinants. Material deprivation; living conditions that expose to risk factors; dysfunctional health services; varying health systems; and variation to access to health care (MCkinnon et al 2014:165-166). Medical and social solutions to reduce inequality shall consider these factors. Mulholland and colleagues in their analysis of equity and child survival interventions of demonstrated how a child with a high chance of mortality has a higher chance of getting pneumonia and limited access to quality medical care (Mulholland et al 2008:400-403). Therefore, an equal provision of everything for everyone does not warrant fair heath outcome at the end.

2.4 MEASUREMENT AND PATTERN IN HEALTH INEQUALITY/INEQUITY

Health inequality can be measured using standard epidemiological techniques. Two major ways of presenting inequality exist among different groups in epidemiology. Absolute and relative difference, absolute difference gauges the gap between the advantaged and disadvantage by subtracting the difference. Relative difference

demonstrates vulnerability of the disadvantaged group by calculating the ratio how much the disadvantaged group has relatively lost (Kenneth 2012:38-45).

More analytical, primarily econometric tools are also applied to gauge and establish cause and effect relations. Concentration index and decomposition are popular methods promoted. Concentration index is commonly used; it helps to describe the gradient distribution of health situation against socio-economic groups like wealth and education. The x-axis always represents populations that are ranked based on wealth or educational status, while the y-axis represents the health indicator being evaluated. An imaginary 45-degree line represents equity, a line above or below shows inequality. The area between the line and the imaginary line times 2 is concentration index (CI). If a certain health condition is concentrated among the poor/ disadvantaged, for example prevalence of a disease, the curve will be above the 45-degree line (Costa-Font & Hernandez 2012:197).

2.4.1 Pattern and grades of health inequity

Measuring health inequality and tracking progress is considered as one of the important steps in reducing health disparities (Truman, Smith, Roy, Chen, Moonesinghe, Zhu, Crawford & Zaza 2011:3-10). Van De Poel and colleagues, cited in Graham (2007) classified grade of health inequity, particularly in to three major groups. “Mass deprivation” is a status where overwhelming majority of the population doesn’t have access to health services and only small portion of elite citizens are served. “Queuing” is another status where only the upper and middle class are being served well and the lower class is not. “Exclusion” is a situation where only few section of citizens; usually minorities are excluded or unreached by health services (Graham 2007:20-9).

Empirical presentation of health inequality or differences is easier than inequity, which entails subjective judgements. Multiple approaches are adopted by United Nations (UN), governments, activities, politicians and academicians to analyse and present health disparity. There are three common approaches, however.

(1) Health difference at individual level, this approach presents difference analysed at individual level and communicated as a disparity between specific individuals

than social groups. This model does not establish a link between individuals' health status and other determinant factors like ethnicity (Graham 2007:4).

(2) The other model is presenting health variation among different groups. This approach is common and presents how health varies among social, economic or gender groups. It demonstrates how health varies among different groups. Countries commonly present the inequalities among different economic class of their citizens.

(3) The other approach is representing health disparity among populations that are in socially unequal position. This has a broader dimension and gauges health difference among different groups that are placed at a different level in social strata. This approach represents more structural variation that has been created due to social, political and economic factors that shape social positions in states. Inequalities among rural and urban populations in Africa present deeper inequities than comparison of the well off and the poorest (Graham 2007:8). This proposed research study will primarily use the last approach for its rigorous and broader scope of understanding the underlying socio-economic determinants of health.

2.5 CHILD HEALTH, GLOBAL, ETHIOPIA AND INEQUALITY

Tracking child health status and inequality got strengthened during the implementation of MDGs. The major sources of this information are the annual child morality report and Countdown2015. The global Countdown report tracks 47 countries and their progress in child health, with detailed analysis from multiple professionals. It was launched in 2005, followed by other five reports (Victora, Requejo, Barros, Berman, Bhutta, Boerma, Chopra, De Francisco, Daelmans, Hazel, Lawn, Maliqi, Newby & Bryce 2016:2049-2050).

Globally, there are twelve indicators of service coverage to track child health status and inequality: Skilled birth attendance (SBA) rate, skilled antenatal care rate, fully immunisation rate, Measles vaccination coverage, DPT3 vaccination coverage, Child health care seeking during fever, Oral Rehydration Therapy (ORT) rate for children with diarrhoea and Vitamin-A Supplementation Coverage (VAC) rate. These indicators were selected based on their sensitivity to vary and their power to predict child survival

(Bhutta, Chopra, Axelson, Berman, Boerma, Bryce, Bustreo, Cavagnero, Cometto, Daelmans, de Francisco, Fogstad, Gupta, Laski, Lawn, Maliqi, Mason, Pitt, Requejo, Starrs, Victora, & Wardlaw. 2010:2033-2035). The Countdown group, an independent technical group of foundations, Lancet, scientist and researchers use these indicators to track progress against MDGs (Barros, Ronsmans, Axelson, Loaiza, Bertoldi, Franca, Bryce, Boerma & Victora 2012:1226).

The latest report from Countdown confirms that despite the global gain in improving child health, pro-rich inequality persists. However, in their analysis of the inequality among the above indicators, the inequality has reduced from 28 percent points gap to 19 per cent gap (Victora et al 2016:2055). The figure below is taken from Victoria et al (2016) count down report to illustrate the progress in service inequality between 2000 and 2015. Cited in Victora and Barros (2014: e122) most out of twenty-four assessed countries most succeeded reducing neonatal mortality inequality since the early 2000.

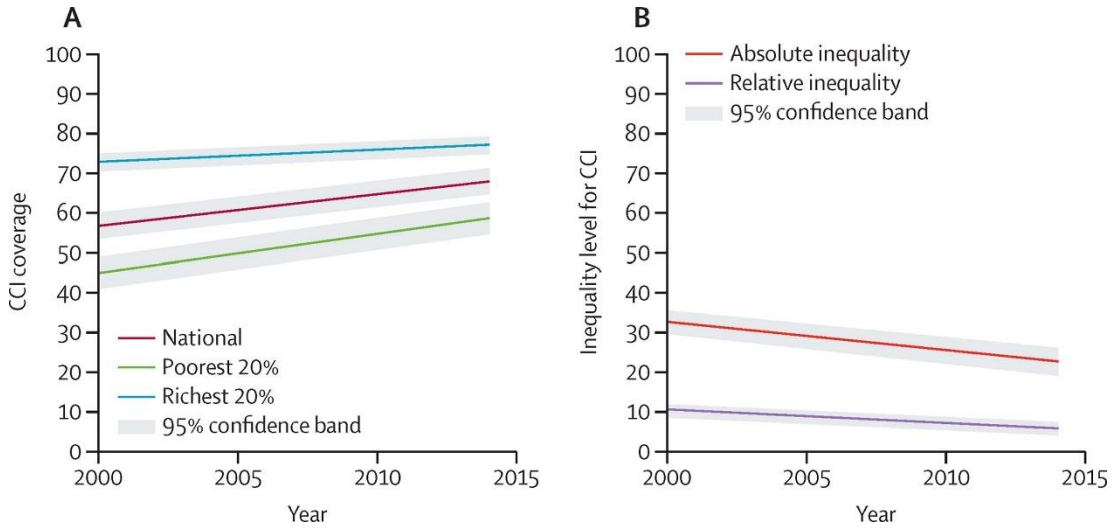


Figure 2.1 Illustration of time trend in absolute and relative inequality of child health care services

(Victoria et al 2016:2055)

The State of Inequality report by WHO (2015) provides an atlas of the situation. WHO reviewed the situation in 53 countries covering the period of 2005-2013. Generally, mortality inequality by urban and rural is common. The situation in SSA is worse, the gap in mortality between urban and rural exceeds 50 children per 1,000 in Nigeria, Niger, Burkina Faso, Burundi, Cameron and Guinea (WHO 2015c:41-42). Tandi and

colleagues (2015) analysed the distribution of health workers and its relationship with health outcomes. They concluded unequal distribution of health is probably contributing to the high inequality in health. They found a very high concentration of health workers in the centre, while the distribution was low for the northern part of Cameroon, with a GINI coefficient value of 0.35 (Tandi, Cho,Akam, Afoh, Ryu, Choi, Kim & Cho:2015:6).

Tanzania and Zambia represent lower child mortality and a lower inequality. Tanzania achieved MDG 4 goals also (Afnan-Holmes, Magoma, John, Levira, Msemo, Armstrong, Martínez-Álvarez, Kerber, Kihinga, Makuwani, Rusibamayila, Hussein & Lawn: e404). Zambia has 64 per 1,000 live-birth child mortality rate, but with a narrow gap between the richer and the poorer. Zambia and Mozambique have high mortality rate but lower wealth inequality (WHO 2015c:41-42). However, Hangoma, Aakvik and Robberstad (2017:01) found a trend in increment of inequality in fever prevalence and stunting among Zambian by wealth status.

Inequality that is based on socio-economic status has also been reported in multiple countries, Quentin and colleagues demonstrated the high level of child mortality disparity in ten African countries. While they found the same pattern of pro-rich inequality in countries, they also reported mortality in Dar es Salaam is 3 time higher than in Cairo (Quentin, Abosede, Aka, Akweongo, Dinard, Ezeh, Hamed, Kayembe, Mitike, Mtei, Te Bonle, & Sundmacher 2014).

One of the popular inequality story is from South Africa. Chinwe and Obuaku-Igwe argued the social inequality in health has got worse during the post-apartheid period in South Africa (Chinwe & Obuaku-Igwe 2015:118-120). The divide is mainly based on ethnicity and provincial. The Western Cape Province and the White South Africans have been benefiting disproportionately. An example cited was the maternal mortality ratio, which is 70 among the Eastern Cape, while it is 27 per 1,000 live birth in the Western Cape (Chinwe & Obuaku-Igwe 2015:121).

2.5.1 Child Health disparity in Ethiopia

Based on the available population based national surveys and few peer reviewed articles; this section describes inequalities in child health related indicators among Ethiopians. Three consecutive DHS reports have been reviewed, EDHS 2005, EDHS

2011 and Mini-DHS 2014, along with peer reviewed articles accessed from databases. The latest credible survey on mortality rate comes from EDHS 2011. The reports from DHS are a descriptive in form; few peer reviewed studies are available with more advanced analysis of concentration index or regression. Most of the peer reviewed studies are based on an in-depth analysis of EDHS reports.

2.5.1.1 Socio-economic inequality in child mortality

Tranvag and colleagues (2013) argued, there are two major dividing lines of inequality in health and survival in Ethiopia - place of residence and wealth status (Tranvag, Ali & Norhem 2013:06-07). Their report has revealed variations in child health by wealth quintile and place of residence or ethnicity. Similarly, among the advanced analysis done on child health inequality in Ethiopia, Skaftun and colleagues confirmed that there is a statistically significant pro-rich inequality in child mortality, Oral rehydration therapy, treatment of pneumonia, vaccination and birth attendance by skilled health workers (Skaftun et al 2014:05-07).

In 2011, with a 169 death out of 1,000 live births; the Child Mortality Rate (CMR) in rural residents was 3.2 times higher than urban residents. There is a reduction in child mortality as we go in to higher wealth quintiles, in the lowest quintile had 1.5 times higher mortality than the highest quintile. The mortality rate among the wealthiest and the poorest ranged between 86 and 137 child deaths per live birth (CSA & ICF International 2012:112-3).

In terms of geographic location, which forms a proxy for ethnicity, the peripheral pastoralist regions of Ethiopia had the lowest survival, while urban regions and Tigray had the highest. The worst level of CMR was recoded in Benishangul Gumuz regional state with 1.7 children dying out of 10 born live, which is 3.2 times higher than Addis Ababa (Mekonen et al 2014:483). This situation is worse than the national average CMR recorded 11 years ago in 2000 (CSA & ICF International 2002:98).

Progress in mortality inequity: Ethiopia has met MDGS for CMR, compared with the 1990 rate in 2013 (UNICEF 2014:18). However, this gain is not uniformly distributed among Ethiopians; inequality indicators by wealth for mortality got worse. In this period, the mortality among the poorest got worse, while the gain among urban and rural

residents is at a similar rate. The progress by different regions is mixed; the situation in developing regional states did not improve or got worse (Skaftun et al 2014:06-07).

Other studies also confirmed the presence of uneven gain among Ethiopians in child survival. Compared between 2000 and 2011, McKinnon and colleagues reported wealth related inequality in Ethiopia has increased by 1.5 for every 1,000-live birth (McKinnon et al 2014: e165). In the same period, CMR among the poorest has risen by 6.5%, while mortality in the third and fourth quintile was reduced by 33.3 and 28.0%. NNMR has increased by 28 and 25 per-cent among the lowest and the highest wealth quintile, while it has been reduced by 23.3 and 13.3 % among the third and fourth quintile (CSA and ICF International 2012:111-113).

Despite the 40.0% national level reduction of CMR between 2000 and 2011, three regional states, namely Afar, Somali, and Benishangul Gumuz have registered increment in mortality. CMR has increased by 31.2% in Benishangul Gumuz, while Amhara, Addis Ababa and Dire Dawa regional states reduced it by 29.9, 28.7, and 26.4% (Mekonen, Tensou, Telake, Degefie & Bekele 2014:3-5).

2.5.1.2 Socio-economic inequality in child health services coverage

The experience from many low and middle-income countries shows that the better off will get medical and health services better than the poorer (Reidpath, Morel, Mecaskey & Allotey 2009:1). In 2012, Barros and colleagues, compared data from 54 countries to report a high wealth inequity under SBA, ANC, CPR, while ORT, VAC and early initiation of breast feeding were found the most equitable (Barros et al 2012:1228-1229). Similarly, Nawal, Sekher and Goli (2013:97) in their multi-county assessment found out a major disparity for ANC and skilled birth attendance in Ethiopia, Zimbabwe, Bangladesh and Nepal.

Even though child health services are supposed to be provided free of charge at public facilities, the disparity in access or utilisation of the services is high in Ethiopia. Like mortality disparity, there is a considerable disparity in coverage of life-saving interventions by wealth status and place of residence (Memirie et al 2016:04). The Ethiopian service inequality is pronounced between urban and rural, among wealth quintile and location of residence (Hosseinpoor et al 2011:881-883).

Table 2.5, below summarises the authors calculation of inequality based on EDHS results from 2011 and 2014. Based on analysis of the EDHS 2011, a considerable level of inequity existed in coverage of all equity tracing indicators except the rate of early initiation of breastfeeding. SBA and ANC coverage are the most unequal, in terms of absolute inequality in Ethiopia, followed by vaccination. Early initiation, ITN distribution, and VAC were also found to be the most equitable. The widest gap was registered between the lowest and the highest wealth quintile in the proportion of women who received SBA. The gap reaches 1000%, with coverage of only 5.0% among the poorest. Similar high level of disparity has been recorded under full immunisation coverage and ANC, where by the richest children have 3 times higher chance of being fully immunised than the poorest (CSA & ICF International 2012:140-141).

Table 2.1 Variation of the child health service coverage indicator by wealth quintiles in Ethiopia

Indicators	Equity gap Q5-Q1	Equity Ratio	Coverage in Q1	Coverage in Q5
care seeking for child fever	24.4	2.5	16	40.4
Oral rehydration therapy	30.6	2.4	21.8	52.4
Vitamin A in the past 6 months	12.9	1.3	45.2	58.1
Full Immunisation	33.7	3.0	16.8	50.5
Measles Immunisation	34.4	1.7	45.3	79.7
DPT 3 Immunisation	35.5	2.4	26	61.5
ITN treated bed net for children	12.6	1.4	32	44.6
Early Start of breastfeeding	9.3	1.2	48.5	57.8
Skilled birth attendance	45.5	10.1	5	50.5
Skilled Antenatal care visits	53.6	3.3	23.7	77.3
Contraceptive prevalence rate	29.3	2.0	28.1	57.4

(Source: Calculated by the author using EDHS 2011 and Mini-DHS 2014)

Like the mortality variation by place of residence, the coverage of life saving services vary among different regions. It follows a generally pattern that urban regions with the above the average coverage and the developing regional states with below the average coverage. The agrarian regions represent the national average rate except Oromia region which lags and recording developing regional states coverage for childhood immunisation, ORT and other indicators.

Another example of service coverage inequality in Emergency obstetric care (EmOC) provides a granular level evidence in Ethiopia. In a study done at central Ethiopia by Wilunda and colleagues (2013:29) the richest 5th quintile women utilised 70% of EmoC service provided by a hospital, while the share by the women in the two lowest quintiles was 4% (Wilunda, Putoto, Manenti, Castiglioni, Azzimonti, Edessa, Atzori, Merialdi, Betrán, Vogel & Criel 2013:27).

Progress in service coverage inequity: Over the 10 years between 2001 and 2014, Ethiopia recorded an impressing scale up of services at national level. All quintiles have registered gains; however, the distribution of gains in the expansion of service is not uniform. The poorest section has recorded gain in almost all indicators except in early breast feeding, DPT3 vaccination coverage and ORT. From a very low based on SBA and CPR of 0.5% and 4.2%, the coverage of these services has grown 10.0 and 6.7 times between EDHS2005 and MEDHS 2014. These are indicators that have registered the fastest gain across any wealth quintile (CSA 2014:33; CSA &ICF International 2006:53).

2.6 EARLY CHILDHOOD MORTALITY: BURDEN AND CAUSES

2.6.1 Global epidemiology and the numbers

At the start of the Millennium Development Goals (MDGs) in 1990, 12.7 million children used to die every year, globally. The world has come long since that. The Lancet series (2003) estimated, about 10.8 million children used to die every year; six countries of the world, including Ethiopia contributed for about 50% all childhood deaths in the world (Black, Morris & Bryce 2003:2226-2227). Recently, the UN Interagency group in its 2014 estimates concluded that globally 6.3 million children die every year in 2014. The world has been able to cut the 1990 level of child mortality rate by half to 46/1,000 live birth (UNICEF 2014:4-7).

This is a major achievement attained by scale-up of health care and reaching the marginalised through the increased commitment of countries and donors to meet the MDGs (Bryce, Victora & Black 2013:1050). The new challenges now include unfair shift of burden on mortality toward the poorest and the most marginalised; a slower progress

towards universal coverage of life saving intervention; and slower reduction in neonatal mortality (Carrera, Azrack, Begkoyian, Pfaffmann, Ribaira, O'Connell, Doughty, Aung, Prieto, Rasanathan, Sharkey, Chopra, , Knippenberg & UNICEF Equity in Child Survival, Health and Nutrition Analysis Team 2012:1341-1342; Chopra, Sharkey, Dalmiya, Anthony, Binkin & UNICEF Equity in Child Survival, Health and Nutrition Analysis Team 2012:1331-1332;). McKinnon and colleagues (2014) reported similar three main features of epidemiological transition in childhood mortality globally between 1990 and 2010. First, a rapid reduction in mortality at global level; second a shift in causes of childhood mortality causes; and third, intra and inter countries disparity in the level of mortality reduction (McKinnon et al 2014: e172-173).

Midway through the implementation of the MDGs, the Lancet Child Survival Series (2003) assisted to renew commitment and draw focus towards the reduction of preventable childhood death (Jones, Steketee, Black, Bhutta, Morris & Bellagio Child Survival Study Group 2003:65-69). Black and his colleagues also produced a popular systematic summary of epidemiology, causes and recommended interventions to reduce child mortality (Black et al 2003:2226-2229). The Series reviewed and disseminated the findings of different working groups and the UN Inter-agency recommendations for improving child survival. This has assisted donors and countries to focus high impact life-saving interventions for a sharp reduction of child mortality (Bryce et al 2013:1049-1051).

WHO and UNICEF reviewed the progress on global child mortality over two decades since 1990 (Lawn, Blencowe, Oza, You, Lee, Waiswa, Lalli, Bhutta, Barros, Christian, Mathers, Cousens & Lancet Every Newborn Study Group 2014:189-190). However, the global distribution of burden in child mortality is not fair. Sub-Saharan Africa (SSA) and South Asia remained to be the concentration sites of child mortality, with a slower progress − 4 out of 5 child deaths occurs in these regions (You, Jones, Hill, Wardlaw & Chopra 2010:931-933). Despite the recent progress, Sub-Saharan Africa in average has missed the MDG targets. The 2013 average child mortality rate for Sub-Saharan Africa stands at 94/1,000 live birth, while the South-East Asian is 55/1,000, these figures are 15 and 9 times higher than the average for the developed countries. The rate of reduction for SSA was 18.0%, while the global average was 50.0% (UNICEF 2014:08-09; Almeka et al 2014:13-15).

This figure taken from The Lancet Every Newborn Series 2 (2014), illustrates how the burned on neonatal mortality is disproportionally distributed at global level.

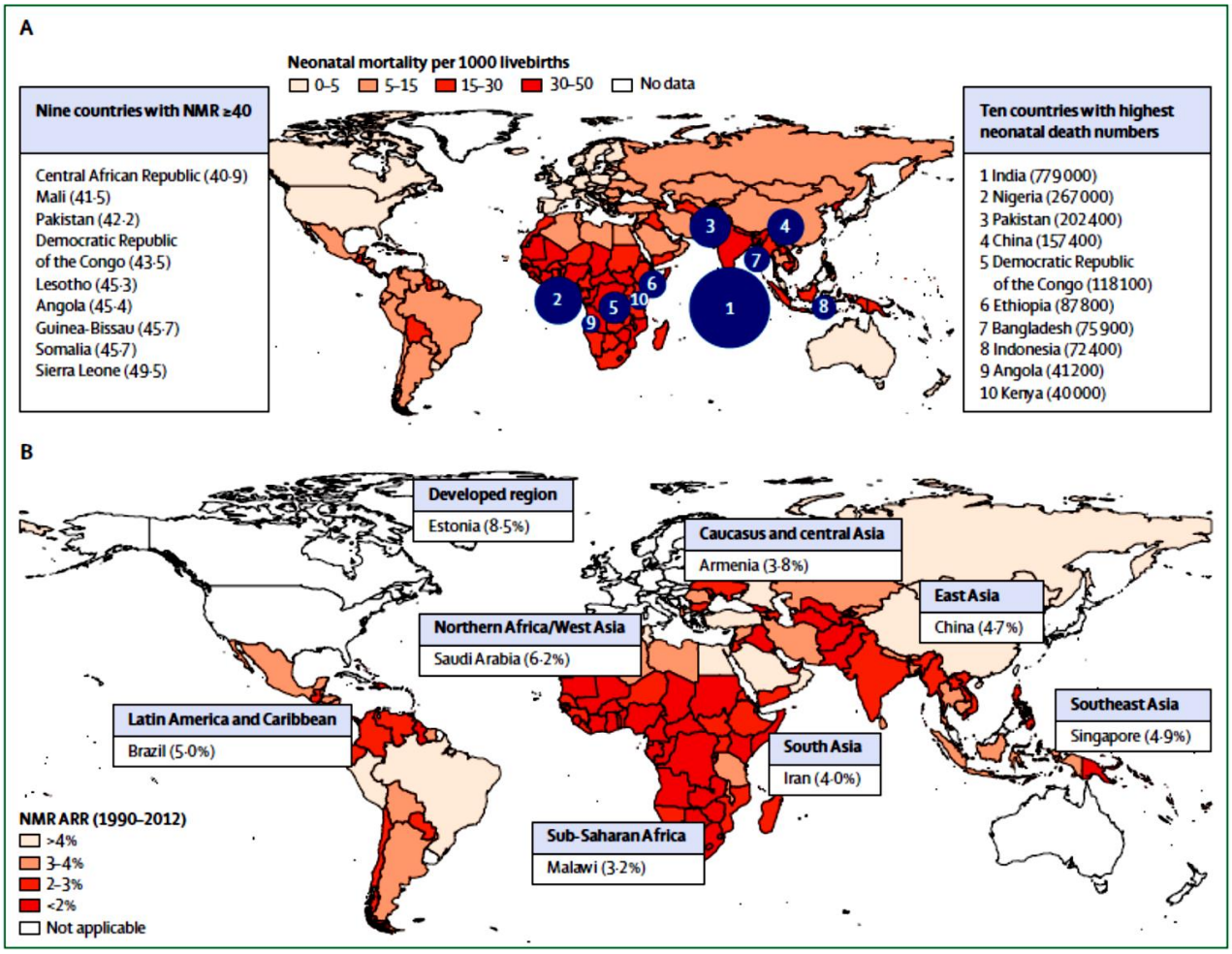


Figure 2.2 The global variation in the burden and reduction rate of neonatal mortality

(Lawn et al 2014:190)

2.6.2 The causes

The top causes of child mortality in low and middle-income countries are largely preventable. The WHO Child Health Epidemiology Reference Group (CHERG) in 2014 reported pneumonia, diarrhoea, Measles, Malaria, neonatal conditions, AIDS and Injuries as the top 7 causes of death in low income high mortality countries (WHO 2014a). Underlying causes of childhood illness and mortality are embedded with in life-course factors and social determinants of health. This includes maternal situation and access to health care during conception (Victora, Fenn, Bryce & Kirkwood 2005:1460). Moreover, broader determinants and risk factors for diarrhoea, pneumonia and other

cause overlap. Conditions like breastfeeding, residence, nutritional status, immunisation and birth weight are immediate causes of pneumonia and other childhood infections. Similarly, unsafe environmental conditions; access to clean water; malnutrition; breastfeeding; and access to health services contribute for diarrhoea related mortality risk (Kassar, Melo, Coutinho, Lima & Lira 2013:272-274).

Pneumonia and diarrhoea: Liu and colleagues (2012) reported 64% of all global child mortality was caused by infections: pneumonia, diarrhoea, malaria, which is then followed by neonatal causes. Pneumonia was the single most leading cause of post-neonatal mortality, with an estimated number of 1.3 million children died of it in 2012, followed by diarrhoeal deaths of 0.7 million (Liu, Johnson, Cousens, Perin, Scott, Lawn, Rudan, Campbell, Cibulskis, Li, Mathers, Black & Child Health Epidemiology Reference Group of WHO and UNICEF 2012:2155). Walker and Colleagues in their systematic reviews of the global burden estimated 120 million and 1.73 billion cases of pneumonia and diarrhoea respectively in 2011 (Walker, Rudan, Liu, Nair, Nair, Theodoratou, Bhutta, O'Brien, Campbell & Black 2013:1406).

Childhood death from diarrhoea and pneumonia is disproportionately concentrated among the poorest of the world population. In another study, Walker and colleagues summarised 24 systematic reviews to conclude Sub-Saharan Africa and South-East Asia regions harbours the highest proportion of severe cases and case fatalities from the two diseases. About 50% of all mortalities caused by diarrhoea and 43% of all pneumonia deaths happen in Sub-Saharan Africa alone (Walker et al 2013:1406).

The severity of outcome from these infections also depends on the age of the children. Due to immunity and care factors, children under the age of two develop sever forms and die of the two diseases disproportionally. 72% of all diarrhoea deaths and 81% of all pneumonia deaths are concentrated among this age group, providing more evidence on which are group to target (Rudan, O'Brien, Nai, Liu, Theodoratou, Qazi, Lukšić, Fischer Walker, Black, Campbell & Child Health Epidemiology Reference Group (CHERG) 2013:2-3).

Neonatal causes: Mekonnen et al (2013:5-8) found place of residence, maternal educational status, maternal age, access to institutional delivery, access to Tetanus Toxoid vaccination determine risk of neonatal mortality in Ethiopia. The share of

neonatal causes of mortality has relatively increased compared with the share of infectious diseases like measles and HIV (Bryce et al 2013:1049). In 2003, only 33% of all global mortality was caused by neonatal causes, while 22% and 21% of mortality were attributed to pneumonia and diarrhoea, (Black et al 2003; Kassar et al 2013:269-275). In 2013, about 44% of all global mortality is attributed to neonatal causes; this is associated with the rapid reduction of post-neonatal mortality.

It was estimated 2.9 million out of the 6.1 deaths during childhood are attributable to death during the neonatal period (Mason, McDougall, Lawn, Gupta, Claeson, Pillay, Presern, Lukong, Mann, Wijnroks, Azad, Taylor, Beattie, Bhutta, Chopra & Lancet Every Newborn Study Group; Every Newborn Steering Committee 2014:455). The rate of reduction for neonatal mortality is not as fast as what has been achieved for the child mortality reduction, 2.0% per year versus 3.4% (Lawn et al 2014:189). Compared with 1990, this has resulted in 36.0% of reduction in NMR by 2010.

The Lancet Every Newborn Series (2014) recapped the latest evidence on neonatal health. Joy and colleagues attempted to summarise the major cause of neonatal death. As illustrated in the figure below, which is taken from their report, pre-term baby, intra-partum causes and infections were leading causes of mortality in 2012 (Joy et al 2014:196).

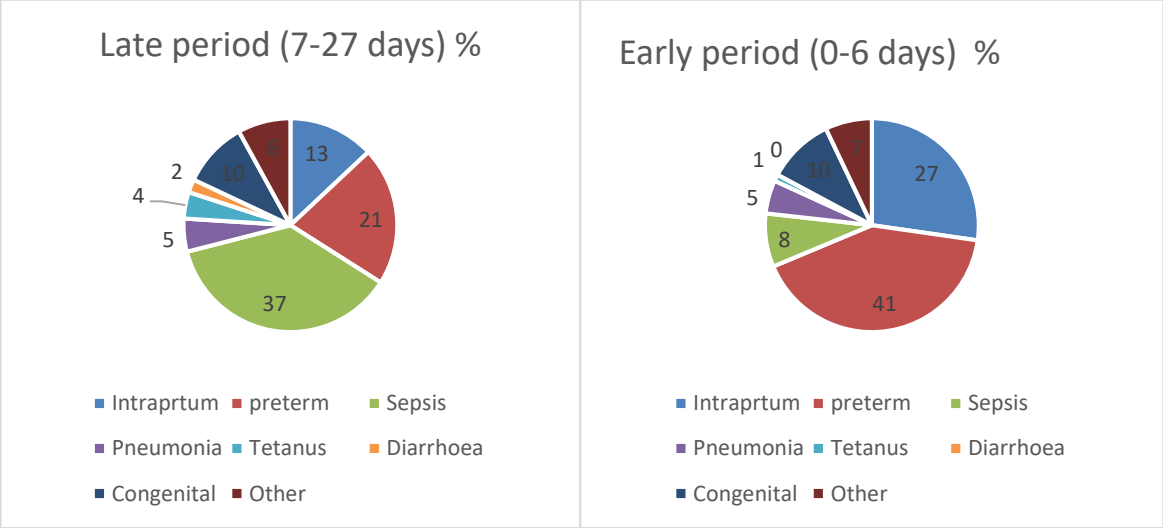


Figure 2.3 Cause of neonatal mortality in 2012

(Lawn 2014:195)

Of all neonatal deaths, 36% happens in the first 2 days, while 72% happen in the first week (Lawn et al 2014:195). This is strong evidence that dictates when life-saving interventions should be concentrated. Similarly, pre-term-babies, born before completing 37weeks; newborns that are small for age; delayed labour; and infections put neonates at a greater risk of death. About, 80% of neonatal death in Sub-Saharan and South Asia occur among small neonates (Lawn et al 2014:192).

2.6.3 Interventions that save children

Since 1980 and particularly during MDGs, multiple experimental studies, systematic reviews and UN recommendations have expanded the world's knowledge on child health and its improvement. The common causes of post-neonatal mortality, pneumonia, diarrhoea and malaria are preventable. The breakthrough in technology, improvement in socio-economic status and simplified care models have helped for the reduction of morbidity and mortality among children (Black et al 2003:2226-2228; Darmstadt, Kinney, Chopra, Cousens, Kak, Paul, Martines, Bhutta, Lawn & Lancet Every Newborn Study Group 2014:174).

2.6.3.1 The post-neonatal period

Since 1990, new vaccines for Rotavirus, Haemophilus, pneumococcus, zinc supplementation, indoor air-pollution reduction, new antibiotics and community based treatment were added in to the menu of life-saving interventions for post-neonatal period (Bryce et al 2013:1050).

Despite the rapid reduction of post-neonatal mortality, globally about 2.2 million children died from either diarrhoea or pneumonia in 2011 (Bhutta & Das 2013:634). Interventions that target infections including Malaria are critical in saving children. Diarrhoea and Pneumonia are leading important causes of death in children, more than half of the childhood deaths could be reduced by scaling up 15 recommended intervention by 2025 (Bhutta, Das, Walker, Rizvi, Campbell, Rudan & Black 2013:1241).

Diarrhoea

Diarrhoea kills by causing severe dehydration; the use of oral rehydration and fluid therapy for prevention and treatment of life-threating dehydration is an established fact. ORS was introduced in 1980s, when the first generation of child survival programs was launched. Monus, Walker and Black in their review of 205 other studies concluded a timely use of Oral Rehydration Solutions (ORS) reduces diarrhoea mortality by up to 93% (Munos, Fisher Walker & Black 2010b: i81).

WHO and UNICEF (2009) published preventive and therapeutic care package to reduce diarrhoea related mortality, Wardlaw and colleagues published the summery of that package on Lancet. Wardlaw et al (2010) argued the recommendation was based on aggregated evidence of the current knowledge of: vitamin A supplementation; hand washing with soap; source or point of use treated water; sanitation and vaccination. Treatment with antibiotics for bacterial diarrhoea and use of Oral Rehydration Solution (ORS) with zinc makes the therapeutic care package (Wardlaw et al 2010:807). Another study took these packages of service and modelled to determine how many lives could be saved by their scale-up. They estimate up to 5 million lives could be saved from diarrhoea- caused -mortality in 5 years of a full scale up of these services (Fischer Walker, Friberget, Binkin, Young, Walker, Fontaine, Weissman, Gupta & Black 2011:1-2).

Rotavirus causes 39% of all the global severe diarrhoeal cases. Munos and colleagues reviewed the effectiveness of Rotavirus vaccine, it reduces 61% of all sever cases and 47% of Rotavirus related hospital admission (Munos et al 2010:56; 160-161). In another study, Fischer Walker et al (2011:6) argue that most of the gains in diarrhoea reduction are attributed to environmental factors. Access to quality water, which is treated at source or point of use, rather than improved water supply cuts new diarrhoea cases by 42%. Environmental sanitation, which includes appropriate disposal of excreta, can reduce 37% of all diarrhoea morbidity, while hygiene hand washing with soap can reduce about 31% of all diarrhoea new cases (Hugh & Birte 2009:304-305).

Pneumonia

Pneumonia prevention is under a fast development; new risk factors like indoor air pollution and zinc deficiency are now added to the list of previously known risk factors (Rudan, Boschi-Pinto, Biloglay, Mulholland & Campbell 2008:410). Pathogens that cause severe pneumonia are Haemophilus Influenza b (HIb), Pneumococcal (PC), Influenza and Respiratory syncytial virus. In the last two decades, new vaccines were developed for HIb and Pneumococcal. Buttha and Das (2013) reviewed 6 studies, a 29% reduction in confirmed pneumonia and 11% risk reduction for developing sever pneumonia was found after Pneumococcal vaccine (PCV) use. HIb vaccine reduces sever pneumonia by 6%, but it does not significantly reduce the burden of confirmed pneumonia and case fatality rate (Gentile & Bazan 2011:18-20).

Zinc supplementation for pneumonia is introduced lately; there are fewer evidences around it. However, most studies show a positive relation between zinc and reduction of new pneumonia cases, but not in reduction of mortality (Fischer Walker, Ezzati & Black 2009:594-6). Similarly, Qasemzadeh and colleagues demonstrated Zinc supplementation during pneumonia illness can shorten the duration of illness and hospitalisation, but not risk of mortality (Qasemzadeh, Fathi, Tashvighi, Gharehbeglou, Yadollah-Damavandi, Parsa & Rahimi 2014:1). Moreover, the preventive supplementation of zinc can positively impact both diarrhoea and pneumonia incidence, it cuts down pneumonia and diarrhoea cases by 19% and 13% respectively, a systematic review of trails demonstrated (Yakoob, Theodoratou, Jabeen, Imdad, Eisele, Ferguson, Jhass Rudan, Campbell, Black & Bhutta 2011:1). Fischer Walker, Ezzati and Black (2009:591) demonstrated zinc deficiency contributed up to 4.4% of all childhood mortality in 2009.

Finally, a case with pneumonia needs to be treated with antibiotics, without which it is could get fatal for children, immune-compromised adults and elderlies. Access to a medical service that provides treatment is critical for the reduction of pneumonia mortality. Most health systems in the LMICs can’t provide such services for all as needed (Buttha et al 2013:635).

2.6.3.2 The neonatal period

As captured in the Lancet Neonatal Series (2005), the challenges of resolving new born and maternal death are complex and dependent on countries' ability of providing advanced therapeutic and preventive care (Darmstadt, Bhutta, Cousens, Kak, Paul, Martines, Bhutta, Lawn & Lancet Every Newborn Study Group 2005:972).

A universal coverage of basic and comprehensive Emergency obstetric care at health facilities can reduce neonatal mortality by 71% (Dickson et al 2014:438). Skilled birth attendance is almost universal in developed countries, while the global average is 66% and the Sub-Saharan rate is at 50% (WHO 2013b:3). However, delivery at heath facilities would be more effective, if the facilities have got the capacity to take care of high risk babies. Wall and colleagues in their multi-country review of available evidences, concluded that facility based neonatal resuscitation in low income setting can reduce intra-partum neonatal death by 30%. A combination of resuscitation and other cares at community based setting can reduce 42-70% of all intra-partum neonatal death (Wall, Lee, Carlo, Goldenberg, Niermeyer & Darmstadt 2010:399-400). Similarly, Lee and colleagues demonstrated neonatal resuscitation can reduce up to 38% all mortality and future squeal by preventing hypoxic encephalopathy (Lee, Cousens, Darmstadt, Blencowe, Pattinson, Moran, Hofmeyr, Haws, Bhutta & Lawn 2011:10, 17-18).

Premature and small babies require a special care; they die of breathing difficulties, cold and infection. A Cochrane review of corticosteroid treatment for a preterm labour helps to fasten the maturation of foetal lung reducing 28% risk of neonatal deaths from prematurity (Roberts, Brown, Medley & Dalziel 2017:18). A scale up of corticosteroid use in low resource setting can save up to 400,000 neonates (Costello & Azad 2015:585-586). Thermal care like skin to skin, delayed bath and head covering can reduce 20% mortality in pre-term babies. Antibiotics for pre-term babies and exclusive and early breastfeeding also save lives. About 80% of mortality in Sub-Saharan happens among Small babies, they require advanced care. A kangaroo mother care, placing new-borns very closely in a skin to skin position, hospital care and breastfeeding cuts 50% neonatal mortality among these babies. Similarly, induction of labour for post-term babies, that completed 41 weeks, reduces a prenatal mortality by 69% (Bhutta,

Das, Bahl , Lawn, Salam, Paul, Sankar, Blencowe, Rizvi, Chou, & Walker 2014:352-353).

Finally, by changing the route of delivery for the care of neonatal infections, we can reduce neonatal mortality due to sepsis. Simple infections in neonates can turn in to sepsis and can end up in killing them, mainly during after the first 6 days. The use of oral antibiotics for infection at community level reduces risk of neonatal mortality by 33% (Lassi & Bhutta 2015:191). An injection of antibiotics to neonates with infection even at frontline health care workers level can reduce all neonatal mortality by 34**%**% (Zaidi, Ganatra, Syed, Cousens, Lee, Black, Bhutta & Lawn 2011:6-7). Bhutta et al (2014:348-351) argued components of antenatal care (ANC) like intermittent therapy for malaria reduces neonatal mortality by 31%, while screening and treatment of syphilis reduces 80% of all syphilis related neonatal mortality.

2.7 GLOBAL LESSONS IN AVERTING HEALTH INEQUITY

The current lessons reflect, multi-sectorial response that tackles socio-economic gradients of health inequity and Universal Health Coverage can reduce vertical inequality. Targeted interventions that support the most disadvantaged to feel empowered and get closer access for selected interventions can also reduce inequity. These interventions can be easily implemented and spearheaded by Ministries of Health.

2.7.1 The Social Determinants Model, for Risk Inequity reduction

Social determinants of health are border factors related to way we get born, live, work and age, ultimately affecting our health. Addressing the causes of causes of health is associated with social determinants of health (Bergqvist, Yngwe & Lundberg 2013:2, 18). In a study that was conducted in South Ethiopia, being born from illiterate mother, being born in rural areas, access to Ante-natal care, birth weight and access to soap were found to be immediate cause of child mortality differentials (Dube, Taha & Asefa 2013:4-7).

LMICs have limited experience in recognising the source, type and pattern of the emerging health inequality in their countries. A rich literature is found documenting steps being taken by high income countries in an effort to avert social inequalities in health (Marmot, Allen, Bell, Bloomer, Goldblatt & Consortium for the European Review of Social Determinants of Health and the Health Divide 2008:1661-1663; EuroHealthNet 2015). WHO, in what many consider as a failed attempt to characterise and resolve inequalities; put some recommendations that were not taken up by many countries. The bulk of lesson in inequality aversion comes from HIC and some emerging lessons of MICS in Latin America.

Embedded in a philosophical basis of social determinants of health, the environment, where by people get born live as the cause to health inequality, WHO member countries endorsed the Rio Declaration. Based on its synthesis of the evidences by the Commission for Social Determinants of Health, CSDH (2005-2008), the following five actions were included in the declaration: “enhancing health policies and decision-making, widening participation in policy-making and implementation, improving health

care and services, strengthening international cooperation, and monitoring impact and progress" (WHO 2011:2-5).

Targeting the 'caused of causes of inequality' The main limitation of these recommendations is their implementation. The implementation of SDH approach requires the engagement of multiple sectors beyond ministries of Health. WHO introduced the 'Health-in-All Polices (HiAP)' initiative to enable countries garner government wide multi-sectorial response to improve the situation of their SDH (Wernham & Teutsch 2015: S56). European Union has been championing the concept of health is not solely produced by ministries of health; it is now implementing HiAP (Storm, Aarts, Harting 2011:130; Tallarek née Grimm, Helgesen & Fosse 2013:229). EU defines HiAP as "a horizontal, complementary policy-related strategy contributing to improved population health. The core of HiAP is to examine determinants of health that can be altered to improve health but are mainly controlled by the policies of sectors other than health" (EuroHealthNet 2015). HiAP implementation in SSA is in a very early state, WHO is providing trainings so that countries can adapt it.

2.7.2 Universal health coverage, the pathway towards equity

Achieving UHC through primary health care can facilitate the progress towards equity in countries where the average coverage of health care is low. However, it is not the reliable and the only way (Cylus & Papanicolas 2015:1-4; Rondeny & Hill 2015:5-8). The path to equity through UHC is long, complex and shall be designed based on local contexts of countries (Rondey & Hill 2014:816). Despite 30 years of progress towards UHC by Turkey, gender based health inequality has persisted (Atun, Aydin, Chakraborty, Sumer, Aran, Gurol, Nazlioglu, Ozgulcu, Aydogan, Ayar, Dilmen & Akdag 2013:90-92). WHO defines UHC as "access to key promotive, preventive, curative, and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in access". UHC has two major components increasing the coverage of quality services and providing financial protection (Cylus & Papanicolas 2015:1). The pursuit to meet UHC increases the average coverage of service, reducing the gap between different sub-populations. Thailand's success in ensuring UHC for maternal and child health in the 1990s has assisted to eliminate the disparity of coverage among different wealth and residential gradients (Tangcharoensathien et al 2015:3). Vapattanawong and colleagues in 2007, compared two surveys of 1990 and 2000 demonstrating how a

rapid scale up to universal coverage can reduce child mortality difference between the richest and the poor by 55% (Vapattanawong, Hogan, Hanvoravongchai, Gakidou, Vos, Lopez & Lim 2007:850).

The Lancet Universal Health Coverage in Latin America Series analysed the progress in Health Care Reform for equity through review of case studies from 10 countries (Atun, De Andrade, Almeida, Cotlear, Dmytraczenko, Frenz, Garcia, Gómez-Dantés, Knaul,Felicia, Muntaner, De Paula, Juliana, Rígoli, Serrate & Wagstaff 2014:1230-1236). By early 1990s, Latin America embarked in a large-scale health systems and broader political-economic reform toward UHC and equity. Countries like: Chile, Mexico, introduced distributive programs that introduced insurance, cash transfer and social protection. Brazil and Cuba introduced a publicly financed universal coverage in health, while the others introduced mixed contributory, tax and private schemes (Titelman, Cetrángolo & Acosta 2015:1360-1361). The unique feature of these reforms includes: a social equity intervention, demand and supply side systematically organised reforms that empowered households and provided them protection of financial hardship (Cotlear, Gómez-Dantés, Knaul, Atun, Barreto, ICHC, Cetrángolo, Cueto, Francke, Frenz, Guerrero, Lozano, Marten & Sáenz 2015:1248-1256; Tangcharoensathien et al 2015:1-5). This has led to a reduction in income inequality and rapid scale-up towards UHC. Reduction in income inequality further led to a fast decline of equity gap and ratio in health for these countries (De Andrade, Filho, Solar, Rígoli, De Salazar, Serrate, Ribeiro, Koller, Cruz & Atun 2015:1345-1347).

However, Universal Coverage by itself doesn't guarantee to resolve equity challenges completely (Reich,Harris, Ikegami, Maeda, Cashin, Araujo, Takemi & Evans 2016:813). It provides one set of solutions for a sustainable equitable distribution of health and health care resources. Nearly all, OECD countries have achieved UHC but not health equity (Cylus & Papanicolas 2015:1-4). While the progress towards equity has been impressing in places, where UHC's new success emerged, there are literatures that demonstrate inequity is still important issues in Chile, Brazil, Colombia and other Latin American states (Frenz, Delgadom Kaufman & Harper 2014:727-728, Horton and Das 2015:1157). Without putting equity explicitly in UHC planning and scale-up, due to factor like: inverse care law, inconsistent quality of services, variations in measuring and definitions, UHC will not guarantee equity (Rondeny & Hill 2015:5-8).

Financing the way towards UHC is also another major challenge LMICS face, the economies in these countries has a narrow fiscal space and large proportion of their population is hired by the informal sector (TTangcharoensathien, Patcharanarumol, Ir, Aljunid, Mukti, Akkhavong, Banzon, Huong, Thabrany & Mills 2011:863-870). Based on the lesson only few African countries are working towards UHC through mixed methods of financial protection. The common financing methods used now can be regressive and maintain service distribution in favour of the richer. Mills and colleagues studied the progress towards UHC and equity in Ghana, Tanzania and South Africa. They concluded that the financing model that targeted the informal sector employees in Ghana and Tanzania was regressive. In all countries services provided at public facilities were disproportionally utilised by the richer (Mills, Ataguba, Akazili, Borghi, Garshong, Makawia, Mtei, Harris, Macha, Meheus & McIntyre 2012:126-127).

2.7.3 Demand side financing: Social protection and equity funding

Due to financial barriers, the poorest is afraid of using modern health services, even if there are not fees for medical services. Despite the progress made in multiple countries in making basic services free for mothers and children, communities don't use these services because of informal payment, transportation, opportunity cost and other expenses. The distributive justice lesson from emerging LMICs supports the need for demand side financing that empower poor communities to be able to use services that are at access. Emerging evidence suggest that health inequity can be reduced even in unequal communities through social-protection-conditional or unconditional transfer of assets, free vouchers or equity funds (Cecchni & Soares 2015:e33; Núñez & Chi 2013:15; Paraje &Vasquez 2012:14-15).

Health Equity Fund (HEF) is a financing mechanism whereby a third party will pay medical care and associated expenses on behalf of the poor (Noirhomme, Meessen, Griffiths, Ir, Jacobs, Thor, Criel & Damme al 2007:246-247). Introduced in 1980s in Low-Income countries, HEF schemes have been adopted to in multiple settings. HEF was introduced to replace user fees at point of use. Cambodia led the scale up and implementation of HEF, by ensuring medical expenses, transportation and food expenses of poor families are fully or partially covered. Some HEF schemes combine the use of vouchers.

There is a thick literature that summarises how HEF by empowering the poorest has increased facility based care for mothers and children leading to a reduction in inequity. Dingle and colleagues analysed the change in inequity after the introduction of HEF in Cambodia. They analysed three DHS studies of 2000, 2005 and 2010, tracking the inequity on coverage of child and maternal health services. Among the six indicators they tracked five of them demonstrated major reduction in inequity, a fast fall in ANC and SBA inequity, SBA's concentration index sharply reduced from 0.58 to 0.22 (Dingle, Powell-Jackson & Goodman 2013:3-7). Equity ratio has also shown a dramatic significant reduction. Ir and colleagues (2010) in their case study of three HEF, they recorded a three-fold growth in uptake of facility based health delivery in two years after the introduction of HEF in 2006 (Ir, Horemans, Souk & Van Damme 2010:6-7).

Social protection through transfer of cash or other resources a known as distributive justice program is widely implemented by welfare-states and now increasingly to address health inequalities. Conditional Cash Transfer (CCT) links a disbursement of cash for an adaption of a recommended behaviour by the recipient. Vouchers are indirect transfer of cash.

There is mixed but largely positive set of evidences that suggest CCT can improve the uptake of preventive and curative services of child health by the poor. A 2009 Cochrane review suggested CCT can increase utilisation of services; the quality of evidence on its effect on health outcome was mixed (Lagarde, Haines & Palmer 2009:2-4). However, recent interventional studies and systematic reviews done in Latin America suggest that CCT improves the use of health services by the poorest and the marginalised. CCT improves condition in which children live and can reduce vulnerability by increase uptake of life saving interventions (Owusu-Addo & Cross 2014:611-616) Sixteen different countries are implementing CCT for health in Latin America; where the latest success in UHC is achieved. Checchin and Soares (2015) in their review of CCT in Latin America appraised multiple studies that demonstrated CCT has assisted excluded populations to use preventive services like immunisation (Cecchini & Soares 2015:1-2).

There is a strong evidence that documents an improvement in health care utilisation among poor families enrolled in one of the world's largest CCT program 'Bolsa Familia'/the 'Family Grant' (Shei, Costa, Reis & Ko 2014:1). Another CCT interventional study for the Brazilian 'Family Grant' program, demonstrated 15% reduction in

childhood mortality among poor families enrolled in CCT than the non-enrolled (Rasella, Aquino, Santos et al 2013:59-60). More positive effect of the 'Family Grant' has been reported on reduction of incidence of disease among users (Nery, Pereira, Rasella, Penna, Aquino, Rodrigues, Rodrigues, Barreto & Penna 2014:1-4). Similar positive conclusion on the link between Bolosa Familia and improved access to health was reported (Alves & Escorel 2013:429-430). The Mexican 'Progressa' program evaluations have demonstrated CCT can reduce childhood malnutrition (Ferland, Gertler & Neufeld 2008:839). Barber in her interventional study of Mexican CCT program for Caesarean Section (CS) demonstrated, poor-rural mothers in CCT used 5 percentage points more CS than the non-users (Barber 2009:385-386).

2.8 RESEARCHING HEALTH INEQUITY AND POLICY

A solid recommendation in policy sight towards equitable health in a generation was made based on SDH and other models. Marmot building on the WHO's Commission of Social Determinants of Health provided popular policy recommendations (Marmot et al 2008:1661-1663). He recommended for a systematic package of interventions that target the environment where people are born, grow, live, work and age. He has also highlighted the importance of fair distribution in medical care.

Embert and Randill did an extensive review of over 6,000 peer reviewed articles to analyse the content and methods of health policy research. They found only seven articles that have applied an extensive theoretical framework in analysis of public health policies. Few studies on health equity related policy use standard tools and theories (Embert & Randil 2014:147-149). Researching health policy for inequality is complex, less developed, requires data and understanding of complex underlying factors and policy process (De Leeuw, Clavier & Breton 2014:61).

An effective use of theories in policy analysis was used by Bauma and his colleagues. They probed in to why health polices in Australia couldn't directly address aboriginal and non-aboriginal health disparity (Baum, Laris, Fisher, Newman & MacDougall 2013:138).

2.8.1 The theory of multiple streams (problem, policy and politics)

This theory, along with the '3i framework' will be used to build parts of the methodologies and approaches in this study. The theory of multiple streams enables to research how policy making agenda can be achieved, it can be applied before or after a certain policy has been developed. Health policy making and execution process are complex and non-liner flow from identifying a problem to setting a policy and resolving it. Health policy analysis frameworks are adapted from general policy analysis tools (Wilson and Gibson 2014:7-8). The tools are evolving to include different pragmatic dimensions of factors that influence policy making and implementation process. The use of such theoretical frameworks is limited in LMICs context (Carey & Crammond 2015:134; 141; Walt et al 2008:308-312).

The theory of multiple streams, by Kingdon, is applied to analyse policy designing and implementation processes. It focuses on the policy development process; argues there are multiple streams that need to meet at a certain point in time for formulation and application of policy. Stream of problem needs to meet the stream of the right policy and the right political pressure for recognition of the problem and initiation of a relevant policy (Kane 2016:435). This model has been used to demonstrate how previously existing problems like TB or Malaria could get a policy focus when the three streams meet each other (Ogden, Walt & Lush 2003:179).

Buama and his colleagues in their interview with 20 ministers of health from Australia applied multiple stream theories. The report unveiled how the three streams interacted in decision-making for applying SDH approach for improving inequalities of health among ethnic groups. Ministers were aware of the health disparity and existing evidences. However, they could not champion for effective policy that are based on SDH. This has been partly associated with the lack of strong evidence behind policy options and the recommended SDH approach could not get political tractions. Internal political shifts in Australia resulted in social and economic reforms of equity that has resulted in a pro-disadvantaged 'Medicare' reform (Baum et al 2013:140-142). This policy process theory will form the basis of how this study will be conceptualised in terms of supporting pro-equity policy.

2.8.2 The 3-i Framework and other theories

The 3-i framework is the prime theory that is used in the design of this study.

The 3-i framework is another empirically tested theory that is used to analyse policy development and the way policy makers make choice. The 3-i framework contains: 'Idea', 'Interest', and 'Institutions' paly important role in policy researching (Shearer, Abelson, Kouyat, Lavis & Walt 2016:1201). 'Idea' represents how knowledge, concepts, value and ideas are related to policy development. It explores the level of understanding of the policy issue by the policy makers, compares what exists with what was supposed to be there (Walt & Gilson 2014:14). It covers the ideas and conceptualisation that defines the problem under consideration and values used in the appraisal of the new policy options being recommended (Pomey, Morgan,Church, Forest, Lavis, McIntosh, Smith, Petrela, Martin & Dobson 2010:709-710). 'Institutions' refer to an assessment of institutional set up of government offices or service providers in relation to policy development. 'Interest' is a similar concept like 'people' in the Kingdon model, there are people or groups that will have a specific interest in promoting or pushing back the development and implementation of a policy. This model is different from Kindgon by its focus on broader policy development and implementation issue than setting an agenda for policy focus of the Kingdon.

A recent review of policy analysis process indicated the Policy Triangle Frameworks is the most frequently applied method (Walt et al 2008). Walt in 1994 brought the concept of reviewing beyond the technical content for an effective change in policy to introduce the Policy Triangle Framework. He adapted concepts from different disciplines on Political Science, Economics and Social Science to suggest a new theoretical framework for health policy analysis. This theoretical framework is being widely used now. It argues policy analysis either for a formulation of a new one or review of impact shall understand dimensions that influence effectiveness of policy change (Exworthy 2008).

The Policy Triangle Frameworks (PTF) approach recommends for analysis of content, context and process in policy analysis, looking beyond technical contents. PTF is commonly utilised for retrospectively evaluating certain policy development and implementation process (El-Jardali, Bou- Karroum,Ataya, El-Ghali & Hammoud

2014:46-47). Network theory is another tool utilised to analyse what kind of networks and power balance exists between those who advocate for and against certain policy change (Shearer, Abelson, Kouyat, Lavis & Walt 2016:1202). This theory was reviewed but was not found relevant for this study as there is limited activism for both pro and against a clear equity intervention in Ethiopia during the design of this study.

There is an overlap between the Kigndon's, '3i' and PTF, this research will primarily use a mix of the first two frameworks in designing the research. Idea/Policy from 3i/ Kingdon's; Institutes/ context (from PTF); and Interest /Politics stream dimensions will be utilised in analysing the current and scoping for future policies that can guide child mortality inequity in Ethiopia.

2.9 CONCLUSION

This chapter presents list of the relevant theoretical frameworks for the basis of this study. Theoretical frameworks on health inequality, research methods of inequality and interventions that can reduce inequality are covered. A rich review of literature on the epidemiology, causes and interventions that improve child health are also presented. The next chapters present how their theories and evidence bases are used in the methods, findings and recommendations.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter covers the research design and methodology of the study. It includes description of the population, sample and sampling, data collection, data-collection instrument, and ethical considerations. The study explored policy makers' attitudes and Ethiopian health policy and its implementation in order to develop a guide to reduce child health inequality in Ethiopia. The researcher has also conducted a literature review that covered research studies and articles, theories, policy documents, and government reports (see chapter 2 for full discussion of the literature review).

3.2 RESEARCH DESIGN

A research design is "the overall plan for obtaining answers to questions being studied and for handling some of the difficulties encountered during the research process" (Polit & Beck 2008:66). The proposed design is a qualitatively driven interpretive synthesis. The study was designed in two stages: the primary/secondary data collection and analysis; and the production of a guide. It involves an analysis of different kinds and sources of information to produce a synthesized argument to construct a guide that can facilitate a reduction of child mortality inequity in Ethiopia.

The researcher selected a qualitative research design based on grounded theory, a literature and policy review, and applied Critical Interpretive Synthesis (CIS) to analyse the data (Hunter 2016:920). Grounded theory is frequently used in qualitative research because it has the rigor to describe phenomena and uncover new theories from data (Goldkhul & Cronholm 2010:187-188; Dahlgren, Emmelin & Winkvist 2004:148). In addition, the researcher used supplementary quantitative evidence to guide part of the discussions and the development of the guide. Since there is no consensus on a single definition of equity and inequity. A qualitative approach enabled the researcher to examine the respondents' various perceptions and proposed suggestions to tackle and reduce inequity (Morse 2010:483). Questions to be examined, for example, included:

Should rural and urban Ethiopians have the same survival rate? Are the current variations avoidable or acceptable?

Epistemologically, the normative definition of equity varies from individual to individual. The current policy makers' perceptions of health disparity and their proposed solutions to treat and intervene in this disparity as inequity is more of a subjective reality. Based on the context and the respondents there could be various truths and perspectives on inequity. This was the main reason for adopting a qualitative approach (Morse 2010:483). The researcher also wished to triangulate findings from other researches on health inequality in Ethiopia with the current policy makers' perceptions.

The study was conducted in two phases. Phase 1 was a synthesis of in-depth interviews, policy content and literature analysis to understand the variation in perceptions, practice, existing capacity, and intention of policy makers. The findings from the data collection and analysis were fed into phase 2. Phase 2 developed a guide to facilitate a reduction of child health inequality and mortality inequity in Ethiopia.

3.3 RESEARCH METHODOLOGY

Research methodology refers to the "steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data" (Polit & Beck 2008:758). Research methodology is the process or plan for how the study will be conducted and includes the population, sample and sampling, data-collection instrument, and data collection and analysis (Burns, Grove & Gray 2013:264).

Qualitative Semi-structured interviews, policy content and literature analysis, and Critical Interpretive Synthesis are the methods used in this study. The study interpreted multiple data sources through Critical Interpretive Synthesis (CIS) and grounded theory techniques. A summarized theoretical description of the methods and their relevance to this study is presented in the sections below.

Critical Interpretive Synthesis (CIS) facilitates the use of wide range of quantitative and qualitative information to generate synthesized argument through a qualitative platform of Grounded Theory (GT) techniques (Dixon-Woods, Cavers, Agarwal, Annandale, Arthur, Harvey, Hsu, Katbamna, Olsen, Smith, Riley & Sutton 2006:2;

Entwistle, Firnigl, Ryan, Francis & Kinghorn 2012:70-72). Since the early 2000s, CIS emerged as a new method to study healthcare provision and policy. Dixon-Woods and colleagues (2006) argued CIS puts data and evidence from different sources and generate a third social construct of understanding reality. This social construct is developed based on second social constructs that were from realities reported by other studies (Dixon-Woods et al 2006:1-3). Annandale, Harvey, Cavers and Dixon-Woods (2007:463), Milibank and other researchers applied CIS to understand factors that determine the policy adoption process in healthcare (Moat, Lavis & Abelson 2013:604).

In this study, a mix of primary data; secondary quantitative data; and other studies was processed through a qualitative platform of CIS. A third construct on child health inequality and health policy in Ethiopia has been established from the synthesis of the existing constructs from these sources. Data and information was extracted from each different source and analysed through CIS techniques (Wilson, Ellen, Lavis, Grimshaw, Moat, Shemer, Sullivan, Garner, Goeree, Grilli, Peffer & Samra 2014:4). CIS analysis involves theme development, comparison of multiple studies, identification of themes/ concepts and translation of concepts from one data source in to the other (Wilson et al 2014:4-5, Gilson 2014: iii3-4).

Grounded Theory (GT): GT is a well-established research method in qualitative studies, it has tools of data collection, analysis and theory generation to identify patterns as they emerge during data collection and analysis (Walsh, Holton, Bailyn, Bailyn, Fernandez, Levin & Glaser 2015:582). Grounded theory is one of the most frequently used qualitative research methods that has the rigor to describe phenomenon, unearth new theories from commonly qualitative but also quantitative data sources (Dhalgren & Emmelin 2004:148).

In this study, data collection and analysis were designed based on GT's emergent design. The technical approaches in CSI are built based on GT tools. The researcher collected data, analysed, developed a working hypothesis, and then repeated the same cycle until saturation was reached to respond to the research questions. He has done constant comparison between different data sets and social constructs.

Semi-structured Interviews (SSI): Semi-structured interview is a leading tool and method used in qualitative methods. It evolved in to a research method from a means of

data collection in 1990 (MCIntosh & Morse 2015:2). SSI is a detailed face to face or remote interview of informants to gather detailed information. It gathers information on the experience and perception of the interviewees. Built on an open ending and follow-up questions, semi-structured interviews generate an in-depth set of data. MCIntosh and Morse (2015:3) attempted to illustrate the different purposes of conducting SSI: confirmative, corrective, Interpretive, and divergent. Interviews are usually recorded, transcribed and translated (if required) for an analysis, which is increasingly becoming computer assisted (Johnson 2017:103).

SSI method was preferred over focus group discussion in this study, which could have involved a discussion among homogenous or heterogeneous group. This was primarily to provide privacy and sense of freedom to the study participant, as they discuss politically sensitive issue like inequality.

Literature review and analysis: The main intention of the literature review was not to list or summarize exiting information; it was rather to triangulate with the finding from interviews and inform the production of a guide, ultimately. The literature review targeted for articles and policy documents. Relevant papers and documents were collected through electronic searching, recommendations, and chain reference, purposively.

The following databases were searched: MEDLINE, ScienceDirect, SAGE, CINHAL and Cochran. Over 1,500 records were retrieved searching using key words like: health inequality, equity, child health, and health policy researching, Universal Health Care and health inequality reduction. A further refinement based on key words, geographic and thematic relevance the volume of records for in-depth review got reduced to about 350. While most of the 350 records were cited in this research, 21 were used for further analysis in triangulation and Critical Interpretative Synthesis.

Fifteen Ethiopian Government policy documents that covered the period of 2005 to 2016 were also analysed in-depth. The list includes: Equity Plan of Action 2016; Health Sector Strategic Plans; and Ethiopian Health Sector Vision towards Universal Coverage 2030, Annual Sector Performance reports.

Health policy analysis: A combination 3-i theory, Kingdon's multiple stream and the Policy Triangle Framework and tools were applied in this study.

The ‘3-i’ theory argues effective policy setting and implementation requires: ‘idea’- the appropriate knowledge; the right set-up and capable institute; and interest groups that promote the policy of interest (Wilson et al 2014). The Kingdon’s theory argues policy setting process requires a streamlined intersection of three factors: understanding the problem; having the policy choices; and favourable political factors (Exworthy 2008:321). The Policy Triangle Frameworks (PTF) is commonly used in evaluations of policy. It is used for analysis of content, context and process in policy analysis, looking beyond technical contents (El-Jardali 2014:46).

The researchers found complementarity among these theories and constructed one stream of HPR framework for this study. The study was ultimately designed to analyse the interaction between knowledge and attitude, interest groups, institutional relations and policy contents in Ethiopia. The details and theoretical frameworks of health policy and content analysis approaches used are presented in Chapter 2.

3.3.1 Population and sampling

3.3.1.1 Population

A research population refers to the entire set of elements, individuals or objects having some common characteristics in which a researcher is interested (Polit & Beck 2008:337). The population encompasses all elements that meet certain criteria for inclusion in a study (Burns, Grove & Grey 2013:544).

In this study, the population included leaders and decision-makers from government, donors, UNICEF and WHO that were affecting policy, health systems, and social determinants of health. The leaders from government included: Directors, Team Leader, child health programme managers at the Federal Ministry of Health (FMOH), Benishangul Regional Health Bureau (RHB), Somali RHB, Tigray RHB and Addis Ababa RHB. Peer reviewed literatures on inequity, inequality, child health, intervention that reduce inequality and policy related documents were targeted for policy and literature analysis. The list of policy documents targeted included: three Health Sector Strategic Plans (2005-2015), Ethiopian Health Sector Vision towards Universal

Coverage 2030; Child Survival Strategy, annual reports, the Draft Equity Plan of Action and other will be considered in the sampling population for the policy review.

3.3.1.2 Sampling methods and samples

The sampling for the semi-structured interviews, policy document and other literature review was done purposively. The researcher purposively selected interview participants based on their association with regional states that have significant contrast in child health. Theoretical Open Sampling method was applied, as it has been found to work in Grounded Theory and CIS methods (Strauss & Corbine 1996:73). Samples were selected based on how new theories are evolving and developing, rather than based on pre-determined number of samples (Draucker, Martsolf, Ross & Rusk 2007:1137-1138).

The interviews commenced with participants at federal/central level, because they were involved in setting policy, budget allocation and other resources. These interviews were followed at regional level in the selected regions. These participants were involved in implementing policy and ensuring local level fair distribution of resources. However, based on how themes were emerging, interviews were conducted back and forth between the central and regional informants, until saturation has been reached on emerging themes. This has helped to increase the reliability and trustworthiness of the study by triangulating the results of interview at the federal, regional and district levels.

Articles and policy documents were searched through search engines, recommendations, and chain reference. Similarly, the type and content of literature followed open theoretical sampling until saturation is reached on specific themes.

3.3.1.3 Inclusion and exclusion criteria

To be included in the study, the participants had to

- be currently or recently assigned in an official position
- have worked in that position for at least 6 months prior to the interview
- come from a wide range of positions, including directors, team leaders, heads of RHBs, district team leaders, special advisors, and project managers

- work at the FMOH, DPs, UN (WHO and UNICEF), the selected RHBs working at the FMOH or the selected RHBs or district health systems in the targeted regions of the country

The main exclusion criteria were

- holding positions that were not relevant and directly linked with the study subject
- public servant workers that were in relevant job position but moved to other less relevant new roles in the 12 months before date of interview
- participants and health systems that are not from the selected regions
- participants that didn't want to be interviewed

Accordingly, the researcher selected and conducted interviews with health policy makers, child health programme managers at the FMOH, Benishangul Regional Health Bureau (RHB), Somali RHB, Tigray RHB and Addis Ababa RHB. Please refer table 3.1 for details of selected sampled data sources under this study.

3.3.2 Data collection process

Data collection is the precise, systematic gathering of information relevant to the research purpose or specific objectives of a study (Burns et al 2013:41). Data was collected by means of semi-structured interviews and from the literature review and policy documents. Data was collected and analysed, then a working hypothesis developed and the cycle repeated until saturation was reached.

The researcher conducted face-to-face interviews with the participants, using a semi-structured questionnaire developed for the study (Johnson 2017:103; McIntosh & Morse 2015:5).

Data was also collected from tweets by the minister for health and directors who were directly linked with child health and equity. This was not planned at commencement of the study but later emerged as an important source of data. There were more than 1,500 tweets. Table 3.1 lists the data sources in this study.

Table 3.1 Data sources selected for the study

Data sources	Number and description
Semi-structured interviews (SSI)	Total participants = 20 6 participants were from development partners, UN and bilateral 14 were from government offices (6 Federal level directors and team leaders, and 8 regional and district leaders).
Policy documents	*Health Sector Strategic Plan* (HSDP III 2005-10) *Health Sector Strategic Plan V* (2011-15) *Health Sector Transformation Plan* (HSTP 2016-2020) *Health Equity Action Plan, 2020* *Health Sector Annual Performance Reports*: 2010,2011,2012, 2013, 2014, 2015, 2016 *Health and Health-related Indicators, 2010-2015* *National Child Survival Strategy* *National Road map for maternal and neonatal health, 2015-2017*
Cases of health systems	Tigray RHB, Kafta Humera Distict Benishangul RHB Somlai RHB, Erar Zone, Kubi Districts
Other sources	Tweets by the Minister, State Ministers, and Directors , peer reviewed articles

Twenty interviews were conducted. The researcher personally conducted 16 interviews. Four interviews and site visits were conducted jointly with 3 research assistants. Most interviews took place in the participants' natural setting, such as their offices, to disrupt their routine as little as possible and facilitate natural discussion. Two interviews were conducted telephonically, and the participants chose their preferred place to take the calls. Interviews took place between April 2016 and October 2016. The interviews were conducted in Amharic, Ethiopia's official language and English according to participants' preference. One interview was conducted per day and lasted between 40 and 60 minutes.

3.3.2.1 Development and testing of the data collection instrument

Two semi-structured interview guides were used as data-collection instruments for the interviews (see Annexure E for copies). Separate guides were developed for policy makers in government and UN/development partners. The researcher developed the guides in cooperation with the research supervisor. The original guide was based on the focal area of the study but proved too long and took over one hour when tested. Therefore, a modified questionnaire, based on the feedback, was then used. The

interview guides were used consistently, but flexibly, based on the participants' experience. At the beginning of the interviews, the questions were exploratory, but became more validating and triangulating as themes emerged. The interview guides contained open-ended and closed questions on the following themes: awareness, level of understanding, interpretation of disparity, judged as inequity by policy makers; adequateness of the current tools and policy framework; the politics and institutional arrangement; equity consideration in current strategies; and policymaker's attitude towards the known and potentially known high impact equity reduction interventions.

A structured data-collection sheet was developed for data collection from cases of sub-national health systems. The data-collection sheet was based on in-country existing tools and tested for availability, completeness, and user friendliness. Data was collected at regional and district level on indicators of the five main blocks of the health system: financing, staffing, service delivery performance, availability of drugs, and populations served.

The researcher selected health systems that had maximum variation in performance. The purpose was to compare the case of two extreme health systems based on available data and observation/interviews. A sub-national system is a structure of health system of RHB, District Health Office, Health Centre, and Health Post. The researcher selected low- and high-performing health systems in consultation with the RHBs and the available data. Somali, Tigray and Benishangul RHBs and 3 district offices were selected for data collection on their capacity. This facilitated comparative analysis by means of extraction, coding, and interpretation.

3.3.3 Data analysis

The researcher used ATLAS.ti 7.1.4 for data management and analysis. Data analysis and synthesis enabled the researcher to develop and construct a guide to facilitate reduction of child mortality inequity in Ethiopia. Data was extracted from the different sources and analysed using critical interpretive synthesis (CIS) (Wilson et al 2014:143). In this study, data collection and analysis started together and continued until saturation was reached. CIS analysis involves theme development, comparison of studies, identification of themes/concepts, and translation of concepts from one data source to another (Fleming 2010:201).

CIS takes information from different sources and develops a third social construct of understanding reality, the second construct being researchers' qualitative and quantitative conclusions about reality (Dixon-Woods et al 2006:35). Moat et al (2013:604) point out that CIS is used to understand factors that determine policy adoption in healthcare.

The researcher had two sources of data. Firstly, from the interviews and comparison of sub-national health systems to understand the variation in perceptions, practice, existing capacity, and intention of policy makers. Secondly, from the literature review and policy analysis to understand the pattern, policy direction, and effective global experiences that reduce health inequality. The researcher processed primary data from the interviews and policy content, and secondary data from reports. A third construct was developed from the synthesis of the constructs from the qualitative and quantitative sources.

CIS is built on grounded theory (GT) that guides data collection, analysis, and interpretation. This aids theory generation that helps to track patterns as they emerge during data collection and analysis (Walsh et al 2015:582). Grounded theory has the rigor to describe phenomena and uncover new theories from commonly qualitative but also quantitative data sources (Dahlgren, Emmelin & Winkvist 2004:148). The researcher used GT to develop theories on how inequality in child survival and health care are accounted and the inequality could be reduced. GT enabled the researcher to inductively generate an argument from the data that could be translated into a guide.

Health systems analysis was based on case study data collection approaches, which involved collecting data from several selected sites at one time (Crowe, Creswell, Robertson, Huby, Avery & Sheikh 2011:04). The researcher and assistants visited the health systems, interviewed, and collected data on capacity and performance. Capacity was assessed on five blocks of health systems: financing, staffing, service delivery performance, availability of drugs, and populations served.

3.4 INTERNAL AND EXTERNAL VALIDITY

The quality of research is determined by its validity and reliability. Validity is a major factor in the credibility and scientific rigor of research. External validity determines the domain to which study findings can be generalised beyond the study regardless of the research method used. This was a qualitative study therefore the goal was not to generalise but to gain a deeper understanding of the phenomenon under study (Polit & Beck 2008:219).

The researcher used CIS and GT to maximise internal and external validity, which ensured the trustworthiness of the study. All major steps taken and the context of the study are described to increase transferability. Reliability and confirmability was enhanced through the use of standardized and tested research tools from grounded theory. The major components of the study, which includes: sampling, data collection process and data analysis were driven by grounded theory and CIS tools. Given the volume of the data, the researcher conducted a computer assisted data management and analysis.

Moreover, the researcher used triangulation, peer debriefing, and extended engagement in this study. Triangulation collected and analysed data from different sources and stakeholders. Data was collected and analysed through interviews, literature and policy documents. Multiple interest groups from the central government, districts and development partners were interviewed for triangulation.

Extended engagement is another critical feature of validity in qualitative methods. An extended engagement requires a prolonged experience of observing the value and behaviour of the research populations and their environment. The researcher attended multiple meetings, read documents, observed health systems and health service providers to develop a better understanding of the general characteristics of the health planners, executers, and donors in Ethiopia.

Finally, the researcher debriefed results of analysis to the study participants and peers that were working with in the health sector. Feedbacks from these groups was collected and taken to improve the outcome and credibility of this study.

3.5 ETHICAL CONSIDERATIONS

When humans are used as study participants, care must be taken to ensure that their rights are protected (Polit & Beck 2008:166). Accordingly, the researcher obtained permission to conduct the study, obtained informed consent from the participants, and observed the ethical principles of respect for human dignity, beneficence, and justice (Lobzhanidze, Chikhladze, Pitskhelauri & Tsiskaridze 2016:228-229).

- **Permission.** The researcher obtained ethical clearance and permission to conduct the study from the Research and Ethics Committee of the Department of Health Studies, University of South Africa; the Federal Ministry of Health Ethiopia, and the Ethiopian Science and Technology Ethical board (see Annexure A). Finally, to protect the research process from harm and reduce delay, local ethical clearance was sought from the Ethiopian Science and Technology agency.

- **Informed consent.** The participants had the right to decide whether to participate in the study, or not. The researcher explained the purpose and significance of the study to the participants, what was expected of them, and how data would be collected. The researcher informed them that participation was voluntary and that they were free to withdraw from the study at any time should they so wish, without any negative implications (Polit & Beck 2008:174). Permission to audiotape the interviews also obtained from the participants. Explaining the purpose, significance and steps of the study protected the participants from exploitation. After confirming that the participants understood the objectives, procedures, confidentiality, storage, use and dissemination of data and their role in the study, the participants signed a consent form (see Annexure D). The researcher also requested permission to tape-record the interviews. Only one participant did not agree to be recorded or quoted. The researcher and assistants took field notes on non-verbal communication and emerging themes and how the results would be changed into abstract theories.

- **Confidentiality, privacy and anonymity.** The participants were assured of confidentiality, privacy and anonymity. No names were used in the interviews or transcriptions. No information could be linked to a participant or institution. The

researcher assured the participants that all information would be treated confidentially and not shared with anyone. All data collected during the interviews would be stored in a secure cabinet only accessible to the researcher. In addition, after completion of the study, all printed and electronic data would be destroyed.

3.6 CONCLUSION

This chapter described the research design and methodology for the study, including the population, data collection and analysis, and ethical considerations.

Chapter 4 discusses the data analysis and interpretation, and findings.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION, AND FINDINGS

4.1 INTRODUCTION

This chapter presents the results of the critical interpretive synthesis from interviews, policy documents, observation and tweets. The study commenced three years before the Ethiopian 2016 unrest, which had some components of broader inequality issues. The contents of this chapter should not be misinterpreted for any political reasons that may worsen the situation of Ethiopian children.

The researcher produced a synthesis after a line-by-line coding and analysis of selected articles and policy documents, interviews, and tweets in one ATLASti hermeneutic unit. Ethiopia has one of the highest levels of child health inequality among most of the low- and middle-income (LMIC) countries despite having met the MDGs in child mortality (Ayele & Zewotir 2016:03). This study found a generally high level of awareness of this inequality among the highest political and technical leaders of the health sector. At the same time, there is varying awareness and interpretation of disparities as inequity among the staff of the FMOH, while donors seem to interpret disparities as inequity. Ethiopia lacks a clear policy guide and targets in terms of reducing health and child health inequalities. Agenda setting in policies that affect inequality are usually done in a smaller group at the highest level of the FMOH. The progress achieved in equity reduction is perceived as late and slow by some of the study participants. Key individuals and interest groups interact with institutional in affecting policy setting and implementation of inequity reduction.

In this chapter, the terms inequality and inequity are used interchangeably to represent unfair disparities in child health.

4.2 DATA MANAGEMENT AND ANALYSIS

The researcher used ATLAS.ti 7.1.4 for data management and analysis.

The researcher transcribed the tape-recorded data and translated it into English, whenever necessary. All the transcribed data was saved in ‘rft’ formats to be imported to ATLAS.ti. Extracts were taken out of selected articles, tweets, and policy documents. One ATLAS.ti hermeneutic unit was developed to import all the data sets to one unit or project. Coding was based on the hermeneutic unit as one set of data. This means an article and a transcript from an interview could share one or more codes and be entered in the same or different categories.

Although ATLAS.ti was used for the analysis, in grounded theory, data collection is also part of analysis. Data analysis commenced during data collection and writing field notes. The researcher analysed the data using CIS, which applies grounded theory. CIS is an iterative process that uses interpretive synthesis and ground theory, to constantly compare different data and develop a theory grounded in a range of sources. The steps followed were not rigid, but required constant comparisons and repeating steps.

4.2.1 Coding and categorising

The researcher adopted a deductive analysis approach by starting with a wide range of detailed codes and through further coding and categorisation reduced the initial number significantly by merging codes and forming categories and sub-categories (Creswell 2007:62-67). This resulted in the creation of concepts and major categories deductively from a combination of data sets. The deductive approach led to the establishment of codes, code families, networks, documents and document families (see table 4.1 and figure 4.1).

Coding gives a unique identification and characteristics to texts, and describes the contents of the transcribed data. Further analysis merged or clustered similar and related codes together and identified themes and categories. This led to the formation of theories of cause-and-effect or relations, and eventually produced an account.

The researcher started with 214 codes. After further analysis and merging, only 80 detailed codes remained. The number of codes and code families changed, until finally 10 code families, 3 themes and 8 categories remained. Table 4.1 and figure 4.1 present categorisation, coding and theme development and the complex network of codes, code families, categories and quotes during analysis.

Table 4.1 Categorisation, coding and theme development

3 Themes	Perception, knowledge and attitude	Institutional and policy factors the affect inequality	Response to equity reduction
Major categories	• Strong positive knowledge and support • Mixed quality of knowledge	• Interest groups and political drive • Policy content and denialism • Paternalism and relations between MOH and RHBs	• Negative attitude globally • Denialism and sustainability concerns • Acceptance
Number of quotes, code families and codes related to themes/ categories	• 189	• 210	• 156

Figure 4.1 illustrates the complex network of codes, code families, categories and quotes during analysis. An example of the policy content category and its code families with related quotations is also presented.

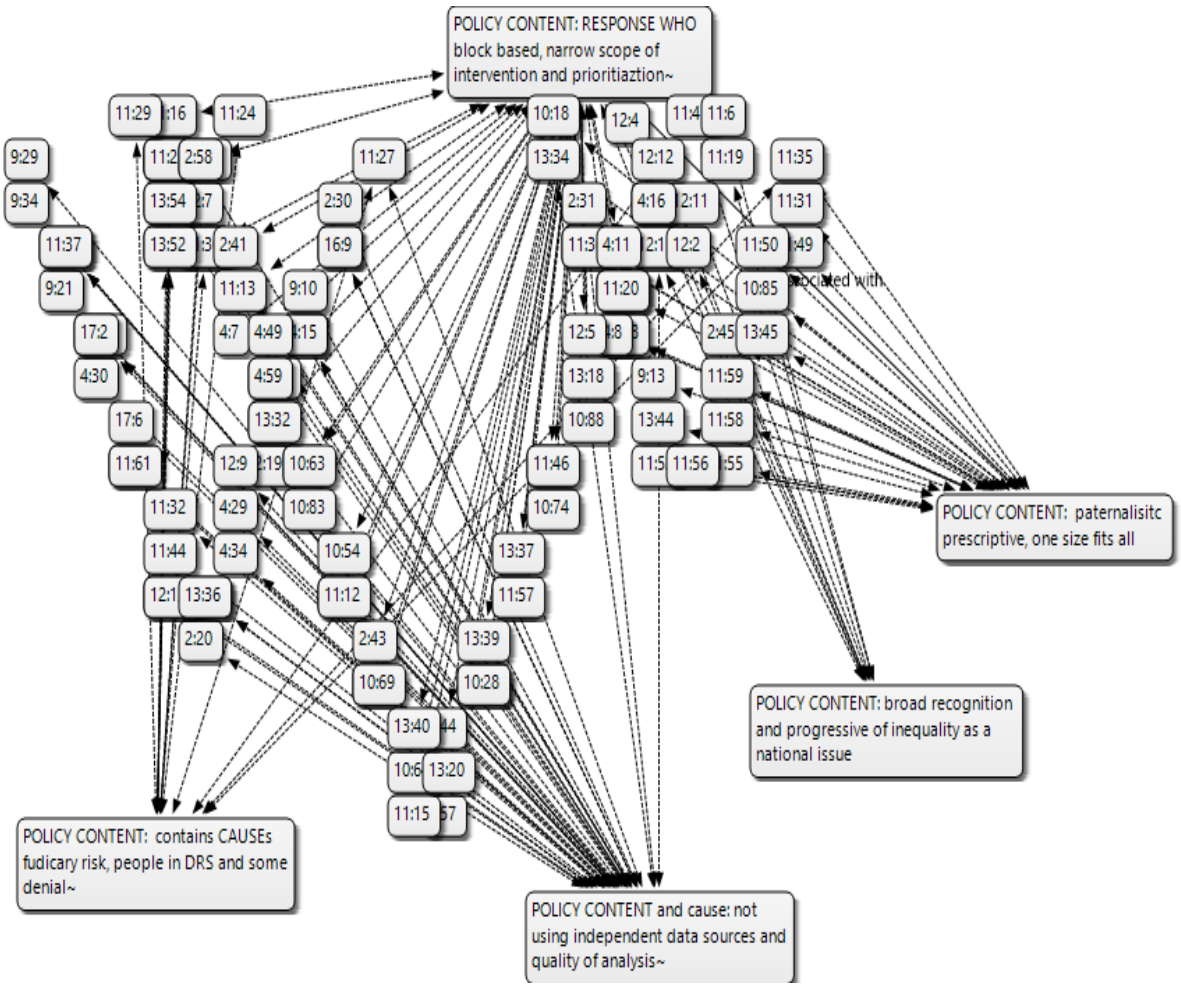


Figure 4.1 Codes, code families and quotations for the category of *'policy content and denialism'*

4.2.2 Secondary analysis and relations

After coding and categorisation, the researcher analysed relations and synthesised the categories, using CIS. The researcher applied the following stages and tools of CIS: concept mapping; coding and categorisation of themes; translation of one concept to another to develop a new concept which is a synthetic; enrich the new construct comparing it with the available literature and evidence, and finally bring the constructed theory and themes together through a line of argument technique. The researcher went back and forth between each step until saturation was reached. Figure 4.2 illustrates a sample of networking and relations identified through ATLAS.ti.

The researcher compared attitude, knowledge and perceptions with the literature reviewed. What government policy makers at the centre talk about, what others think

and what the actual policy states was also compared with global best practices in the literature. In addition, the researcher repeatedly constructed relations and networks between sub-categories and code families to test the analysis for saturation. Figure 4.2 illustrates a sample tree constructed during analysis.

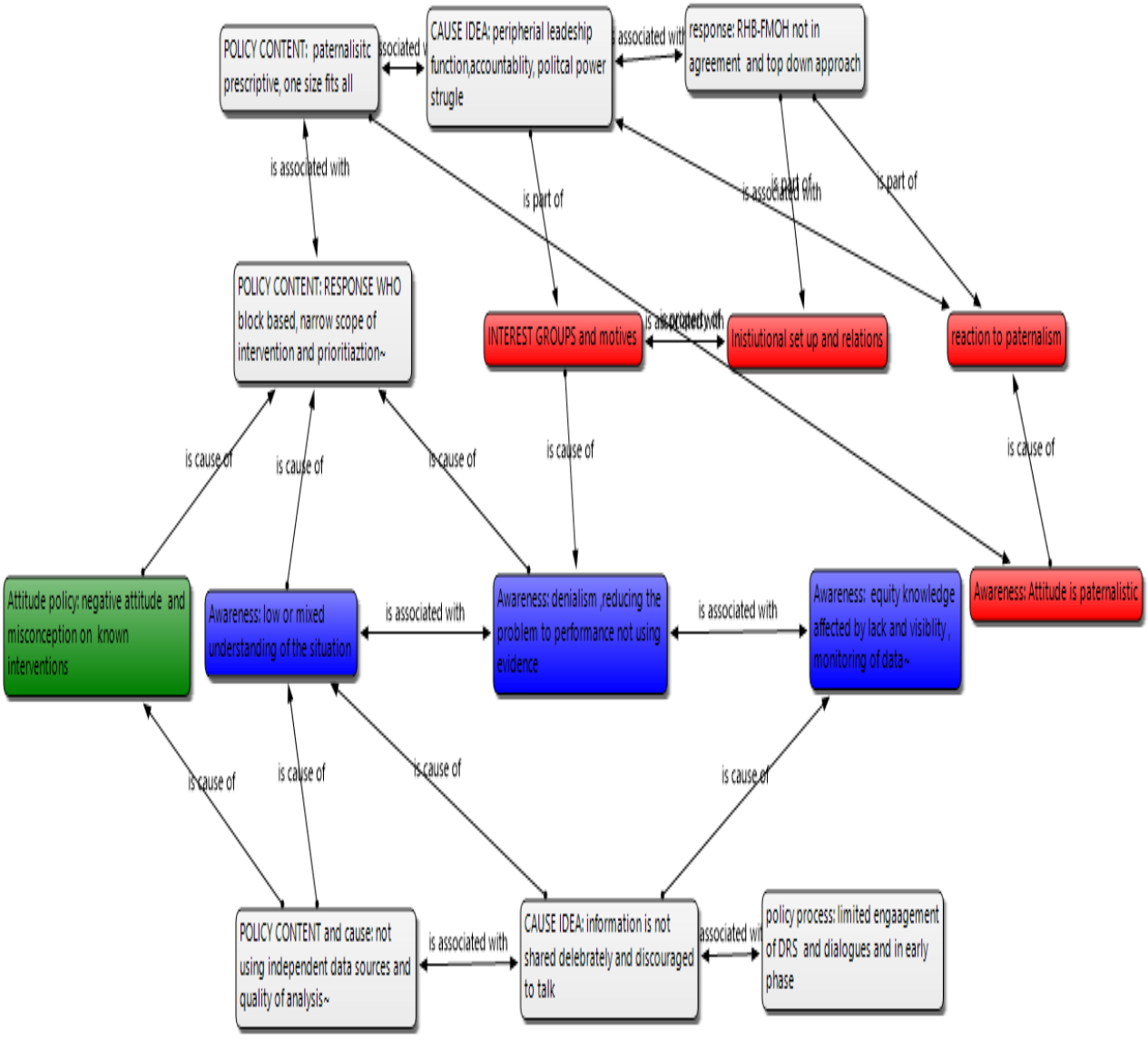


Figure 4.2 A sample of networks

4.3 FINDINGS

This section discusses the findings from the synthesis of the different datasets collected**.** The findings are presented according to the themes and categories identified: policy makers' awareness; factors, and the response, including the policy contents.

4.3.1 Policy makers' awareness and perceptions of inequality

This section synthesises the findings of policy makers' knowledge, perceptions and attitudes against the literature reviewed and relevant policy documents.

4.3.1.1 Knowledge and misconceptions

The policy makers' knowledge and misconceptions appeared to be improving slowly.
In 2013, the national child mortality rate was 64 per 1,000 live births, which was higher than the global average (UNICEF 2014:18). Although health achievements are improving, Ethiopia has a high inequality in child survival rate among different segments of the population (Skaftun et al 2014:04). Ethiopia is one of the countries with a high level of wealth and geographical inequality and socio-economic inequality in child mortality and service coverage (Barros et al 2012). The findings from the interviews, policy documents and government reports indicate a reluctance to explicitly agree that Ethiopia has one of the worst rates of inequalities in health. However, policy makers' awareness of regional inequality of health has improved. The participants agreed that the awareness started from a low level and slowly improved in the chain of technical leadership.

> "I think they are feeling the pain [from inequality] now." MOH participant, 2

> "We provided training and presentations to help staff understand performance and inequality issues." Senior MOH participant, 1

There is a higher level of awareness of the severity and dimensions of child health inequality at the top leadership level of Federal Ministry.

> "In the last DHS the under-five mortality was 88 at national level and in Benishangul it was 168. This is the figure that is in the same country, so this is an equity issue with respect to geography, whether in respect to gender, whether in respect to ethnicity or whether in respect to economic groups, it has been a very serious problem." Senior leader from FMOH, 1

Similarly, the health development partners were generally aware of the situation, although they struggled to find reliable and non-conflicting data. At the same time, due to a slow trickle down of knowledge and other factors, local health district offices and regional governments were less aware. Key political leaders in the Developing Regional States (DRS) were also not fully aware of the state of inequality in their regional states. They were not informed about the situation in the health sector and their comparative status against the national situation. This lower awareness was partly linked to the limited priority given to the sector, and to the limited regular communication that should come from their respective Regional Health Bureaus (RHBs).

> "The communication between RHBs and the president is not working. The RHBs, for example, they don't want to report any negative things to the president's office. If the [regional] president office is not aware of the situation, it is difficult to address the problem." Senior participant from FMOH, 5

The researcher found few studies that explored policy makers' perception of health inequality in Africa. Limited awareness and lack of interest were reported from many low- and middle-income countries (LMICs). In 2016, King, Harper and Young (2013:558-571) found that leaders in LMICs were less aware of health inequities and tended to prefer to improve the general status of health in their countries rather than address inequalities. Among some of the studies that explored 70 countries involved in the World Health Survey, LMIC countries consistently ranked reduction of inequality under improving general heath and health care responsiveness, including Ethiopia (Kin, Harper & Young 2013:558-571). The awareness in developed countries is high, partly linked with relatively mature health equity programmes that had reached policy makers (European portal for action on health inequality 2016).

Similar trends were found in a study that covered five counties, namely Uganda, Brazil, Cuba, Norway and Nepal in 2012 (Mirelman, Mentzakis. Kinter, Paolucci, Fordham,

Ozawa, Ferraz, Baltussen & Niessen 2012:543-549). Four of the five countries put more weight on efficiency factors than equity factors. This tendency was partially linked with level of awareness among policy makers (Mirelman et al 2012:543-549).

Despite the growing knowledge on regional inequality, most of the leaders did not perceive wealth inequality as a major issue and did not want to discuss it openly during the interviews. However, most of the known child mortality and service uptake inequalities are driven by wealth inequality and educational status of mothers in Ethiopia. The role of regional inequality in driving mortality and service coverage is generally minimal (Skaftun et al 2014:01, 06). However, the findings from this study suggest that the existing policy and policy makers put regional inequality as a key priority in Ethiopia.

Resolving misconceptions among the policy makers is an important component of policy making. The main misconception identified in this study was equating unfair structural disparities with a consequence of low-performance from clinical care providers in some localities. This phenomenon could be misconception associated with a lack of understanding or denial. Denial as a reaction is discussed in section 4.3.3.1. Most policy documents and key informants indicated that low performance and inequality are routinely used interchangeably in the sector.

> “Sometimes they get confused in identifying performance and inequality issues. There was a wider confusion as a ministry office on the whole.” Senior leader in the MOH,2

> “Actually, in terms of coverage, the Somali [regional state] performance is below the national average; the main problem is that the performance is low.” Senior leader in the MOH,5

The most likely situation in the Developing Regional States (DRS) is inequality that is linked to chronic issues of security, marginalisation, community empowerment efficiency, and readiness of the health system.

The right knowledge and perception are important in making sensitive policy decisions, and the case of Ethiopia will be no different (Clarke, Swinburn & Sacks 2016:1854). In

2014, Moore, Kibombo and Cats-Baril (2014:897) conducted a knowledge and perception study among Ugandan policy makers to understand the factors behind taking a policy decision on safe abortion. The study reported that mixed quality of knowledge and widespread misconceptions were blocking the scale-up of high impact interventions. The decision-makers interviewed were divided in terms of their knowledge of the benefits of safe abortion. Females forwarded more positive medical and social benefits of abortion, while males generally blocked the concept of safe abortion scaling-up due to misconceptions and fear of over-use.

In the early 1980s, there was a mixed level of knowledge and limited cues for action in the UK, the US and Europe, which are now the most progressive regions (Bleich, Jarlenski, Bell & LaVeist 2012:7-8). The Black Report in the UK was rejected without action. Policy makers argued that health disparities were the result of interaction between patients and their doctors. By the late 1980s, a deeper understanding of health inequalities emerged as more studies were conducted and shared demonstrating the 'causes of the causes' (Bleich et al 2012:09-10; Exworthy, Bindman, Davies & Washington 2006:76-77).

4.3.1.2 Lack of consensus on level, features and cause of inequality and inequity

The findings suggest that while the central government stewardship is growing fast, there is no consensus among key stakeholders on the severity, features and underlying causes of child health inequalities. Varying knowledge and lack of reliable data and centralised decision affect the quality of dialogue and consensus.

The lack of consensus was observed among teams in the FMOH, and between the FMOH and the regional states. Broadly, the FMOH perceived regional inequalities as preventable but mainly linked with the non-responsiveness of the respective RHBs. The RHB representatives assumed their situation was not as bad as perceived by the FMOH and the FMOH did not listen to their views.

> "At this moment, we can't consider that our region is lagging behind other regions." Senior participant in DRS Regional Health Bureau (RHB),7.

In the FMOH, the Directorate for Health Systems Strengthening in the DRS leads the awareness creation process. The Maternal and Child Health, Medical Services, Planning and Programming, and other teams seem to have their own views of the disparity. Some staff members hold that the inequality is just under-performance and the causes are mainly linked with the health care delivery system.

> "That [the difference in views] is the difficult part with the ministry, the gap among the higher management." Key participant from development partners, 11

The awareness and understanding of dimensions of inequality is still under-developed in the FMOH. An example of the variation was observed as two staff members from two different directorates of the FMOH described the situation during the interviews.

> "My assumption [is] I think their [people in DRS] income is lower than the others." Mid-level participant in FMOH, 6

> "By the way, I don't think people in DRS are in a different economic challenge compared with other people in the country." Senior participant from another department, 1

The literature suggests lack of census can be expected in the early stages of addressing inequality (Droomers 2007:16; Exworthy et al 2006:92). A historical lack of consensus on level and causes of health inequality has been found in other countries too. For example, in the UK and the US, it took more than a decade before action was taken and a major shift in policy when political parties changed in leadership (Exworthy et al 2006:92). Exworthy et al (2006:92) reported that the iterative process took over a decade before the UK acted against inequity. In the Netherlands, there was a shift from addressing wider causes to making individuals responsible by early 2000 following a change in government (Droomers 2007:16-17). In the UK, the Labour Party was associated with increased focus on broader determinants of health and putting the whole agenda of health inequalities forward (Exworthy et al 2006:92).

4.3.2 Effects of data visibility and quality on policy makers' perception

The study found inequality data was not always visible to all stakeholders in a fashion that is understandable and ready for making decisions. This situation could be linked to key stakeholders' varying and mainly low awareness of the state of child or other health inequalities in Ethiopia.

> "Speaking about monitoring, it is about data use and it should be detailed at facilities' level and at facility level they should look at from which *kebeble* (sub-district) people are bringing children for child care, which we are not good at." High-level participant in FMOH, 3

The use of data to understand and monitor equity in Ethiopia is affected by a lack of national equity monitoring frameworks; lack of clear targets in equity reduction; limited use of independent data sources; limited visibility, and use of equity data for decision at local level. Monitoring health inequalities is a key action required to understand and narrow health gaps. The quality of equity monitoring depends on the quality, frequency and timely use of the information (Marmot et al 2008:1661-1669).

> "Equity monitoring follows planning [process]. In terms of geographic monitoring, it depends [on] whether it is comparing coverage and utilisation between regions and between districts or comparing between urban and rural areas, cities and towns. In that case, we have some limitation." High level leader in FMOH, 2

Ethiopia has an integrated monitoring framework that is in-built in the *Health Sector Strategy, 2016-2021* (FMOH 2015:150). However, it does not have an equity monitoring framework. An analysis of the HSTP monitoring framework confirmed that there are a few direct equity monitoring indicators and targets set. However, preliminary discussions are being held to establish equity monitoring systems for the country.

> "We will also produce annual reports about the state of health inequality in Ethiopia to bring political attention and accountability in the sector." policy document (FMOH 2015:10)

Data visibility gets lower as individuals get further from the central leadership. The awareness is worse at district level because districts are not fully aware of their latitude

on the inequality gradient. This is likely to be the case among communities that reside in disadvantaged areas. The FMOH collects data on regional differences and shares the information with its partners and senior leaders. However, an open database or a system is not available to enable all members of leaders and activists at districts to see their rank in equity across the country. Blind to their relative position, the district managers and communities might not become fully motivated to narrow the gap.

> "Actually, we visit them regularly, selecting districts (*woredas*), hospitals and HC and they are not as such aware if they are below the regional and the national average." Mid-level leader in FMOH, 5

At the same time, data does not always flow from districts to central government, which also affects the capability of the centre. The following quotation from the *Equity Plan of Action* (FMOH 2016:18) illustrates the situation: "There exist limitations in preparation and submission of complete and timely reports. Often there is a mismatch between HMIS and programme report."

A similar situation of low use of evidence for equity policy making was observed in the UK in the early 1980s. Exworthy, Blane and Marmot (2003:1908) outlined the steps for how the use of data and its dissemination helped the UK to initiate and shape its equity programmes in health. They summarised how the UK started with the Black Report and then followed with Acheson's inquiry in the 1990s and early 2000 to shape policy making for equity. Exworthy et al (2003:1908) conducted the chains of equity reviews in the UK and some European countries to provide a clear state of inequality reports that guided policy makers.

Producing the right information and making it visible to stakeholder is a key step in policy making. Access to relevant data and information is a key factor for policy makers' knowledge and awareness. Moore et al (2014:893-895) found that most of the policy makers in Uganda were not aware of the depth and breadth of the existing abortion law in Uganda, yet still got engaged in key decision-making.

Quality of data for equity is another area of concern that emerged from the CIS in this study. While peer reviewed works are available on Ethiopia's inequality, they are neither cited nor debated among government staff. The main source of information for

government comes from annual reviews of government's own reports that show an output level coverage of services by regions. Development partners and government staff openly raised concerns on the quality of data from government's own sources. The government data source had lost credibility at least for some indicators, according to a development partner participant:

> "It is easy to claim 96% coverage, which we know it is not true. There are discrepancies between the study done a year ago and the government report." Development partners, 11

Another participant reflected more frustration and signs of uncertainty among development partners:

> "To me it is very unfortunate that we are not doing proper studies to ascertain where we are." Development partner, 11

A near universal coverage of 96% may mean more equitable service provision, if the data is authenticated. Any analysis based on unreliable data can be misleading and conceal disparities among communities. Any intentional or unintentional over-estimation of child service coverage creates a wrong impression that inequality is being reduced and the country is moving towards universal coverage.

There is a high and misleading discrepancy between child vaccination coverage estimates from government reports and surveys. Skaftun et al (2014:09) found that "the estimates done by the Ethiopian Ministry of Health differ somewhat from the DHS' estimates for some indicators. For example, the 2011 report on health and health related indicators published by the Ethiopian Ministry of Health estimates measles coverage to be 82 percent, whereas it is estimated at 56 percent by the 2011 Ethiopian DHS."

Evidence from a participant from a DRS with the highest child mortality rate indicates how potentially wrong or unverified reports on child immunisation can mislead leaders of the sector in the region: "Particularly, we can see the vaccination program, our [regional] coverage in 2014 and 2015 is at a good state, we scored 85 to 86% for the coverage of Pentavalent [antigen] – therefore we are don't think we are much lower than the

coverage in other regions." This participant appeared to be under the impression that vaccination inequality doesn't affect that specific regional state, which is just based on potentially unverified government owned data.

4.3.3 Policy makers' reactions to inequality data and discussions

Discussions on equity are sensitive and involve subjective judgments. The causes are complex and might put individuals or groups on accountability. Denial of the presence, level, effect or the causes can be a way to cope by leaders (McKee & Diethelm 2010:1310-1311).

Throughout the interviews, the study found extensive use of expressions like "us" and "them" rather than "we". This also revealed a degree of transfer of accountability, underplaying the situation, denialism, and blaming the victims involved due to the recent move of open discussion on inequalities in health. Figure 4.3 summarises the common signs of denialism and other reactions found in the study.

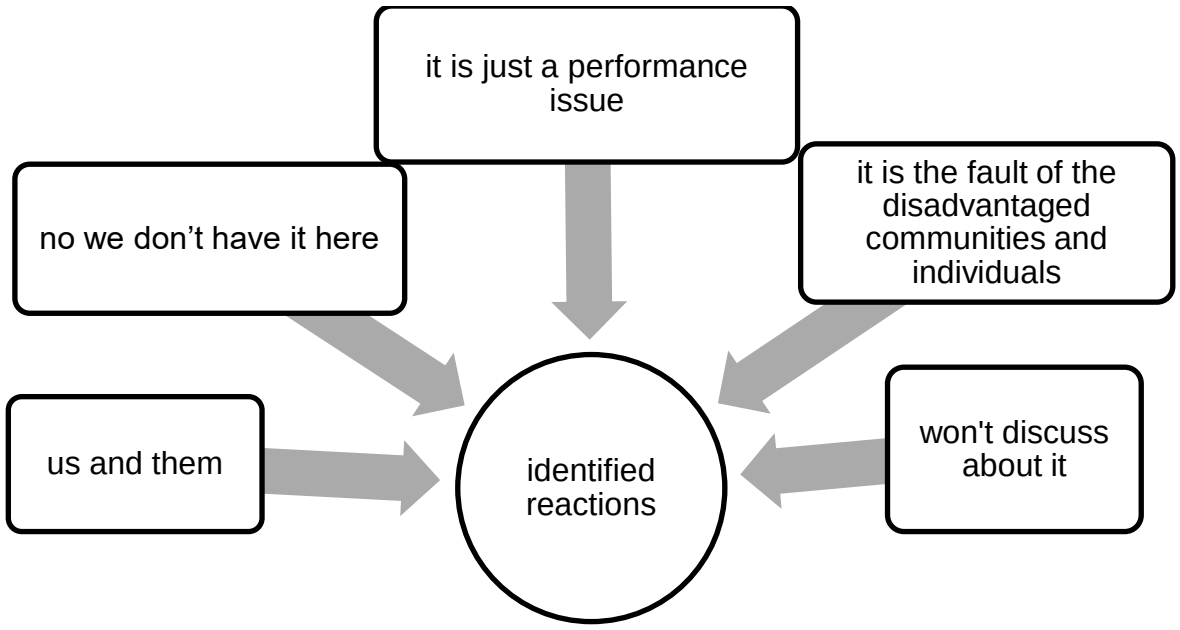


Figure 4.3 Signs of denialism and other reactions to equity discussions and evidence among policy makers in Ethiopia

4.3.3.1 Denialism

The findings suggest that while there is growing empirical evidence of Ethiopian inequality, some participants and policy documents denied or remained silent on some components of the inequality.

Denialism can be a way to be politically correct. Diethelm and McKee (2009:2-4) explored what denialism is and how scientists should respond to it. The generally accepted definition of denialism is a debate or position taken against a known scientific fact, using different reasons. Later McKee and Diethelm (2010:3109) examined how denialism could affect and undermine public health.

In this study, the researcher found the following main features of denialism:

It is just a performance issue. The first feature of denialism expressed by participants included underplaying the level of inequality from a fundamental structural difference among Ethiopians to a simple mixed performance of the health sector. A senior leader at FMOH stated, “Actually in terms of coverage, the Somali performance is below the national average; the main problem is that the performance is low”. That regional state is known for its chronic marginalisation, armed conflict, bad infrastructure, and poorer and less empowered residents.

No, we don’t have it here*.* Another feature of denialism, which first emerged from FMOH interviews and was supported by triangulation from RHBs, was some regional leaders’ denial of its existence. The central government regards this as part of denial. A DRS stated:

> “The regions think they are better than Oromia and SNNPR [states with better situation]. They [staff in the regional states] see the number of staff with Master’s degrees placed all the way from the region to the zones. However, the data [on service coverage] shows a different story.” 8

Furthermore, there is a sense of accomplishment, complacency and belief that ‘the current position of the DRS is fair compared to their very low base’. This argument would appear to indicate that those individuals are closer to believing that ‘the inequality

we observe is probably unavoidable'. This tendency was reflected by RHB participants more frequently than FMOH participants. Some regional state leaders prefer to compare their status with that of twenty years ago rather than the current national average and other regional states. According to a participant from the central government:

> "They don't want to be compared and don't compare themselves with the other regions … They push back saying why do you compare us with the other regions? Mid-level participant from FMOH, 6

> "Sometimes the regional health teams feel like they are working better when they compare [themselves] over the last 20 and 5 years." Senior participant from FMOH, 2

Finally, while there are signs of 'intra-regional inequalities', which are mostly linked with ethnicity or distance from centres, regional representatives denied the presence of such regional inequalities.

> "We have some districts that perform above Addis Ababa and the agrarian regions, but that is not because they got special support [from the federal government], it is by themselves. There are not ethnic-based variations (in our region), the variation is based on commitment." Member of DRS Regional Health Bureau (RHB), 7

***Won't discuss about it*.** Participants did not openly discuss wealth inequality and felt comfortable using phrases like "bad performance" instead of "inequality". Moreover, the effects of armed conflicts, politics and corruption on health inequality were not discussed openly. Participants preferred to avoid the issues or made a gesture, during further probing.

An analysis of the past three strategic health sector plans (HSDP IV, HSDP III, and HSDP II) confirmed very limited use of the word "inequalities". The word "inequality" was rarely used. However, the findings suggest that the government through the FMOH is showing an increased tendency to discuss inequalities, after a long silence that followed a spike focus of inequality in the early 1990s. This does not mean that the FMOH is fully open and covers all key components of the sensitive inequalities. There is no discussion

of inequalities based on religious and wealth lines. Development partners feel that the FMOH is not open to discuss the issue.

> "I see very little appetite; they want to stick to official figures. There is very little discussion about this whole issue." Participant from a partner, 11

The new strategic plan, the HSTP, which featured inequality as one of the two main themes has only 45 words about inequality/equity out of 57,409 words crunched by Atlas ti. The HSTP has been criticised for an absolute lack of direct components whereby it addressed interventions to reduce inequality. This led to the draft equity action plan that is discussed in section 4.5.1.1. However, wealth inequality in health is not addressed in the action plan.

4.3.3.2 Paternalism, unheard and frustrated

The findings suggest that the FMOH appear to be paternalistic and more concerned about the people living in the regions than the local governments. The causes appear to come mainly from the perspective of the centre and largely build on the argument that leaders in the DRS state lack commitment.

> "They think we can't, they think we don't want to perform, this is the thought which I think is problematic." Participant from DRS RHB, 8

The solutions are mainly drafted from the central government perspectives and socio-cultural background. Partly linked with the quality of involvement of DRS in problem analysis, the use of independent data sources and quality open dialogues, the causes of the current inequality are not presented from the point of view of the DRS. Wealth inequality that affects the poorest of the poor is considered a low priority for interventions in the next five years. Most judgements were made at central level and by selected members of staff.

The regional states believe that the FMOH does not understand the situation on the ground and regions are not heard.

> "All emerging regions are not just the same, the situation in [name taken out here] is not just the same as [name], particularly the problem in our region is quite different. We have a different structure – however, the FMOH believe we all are the same." RHB participant, 7

The findings revealed a measure of frustration at the regional states' level that they are being told what to do and the broader inequality was presented solely as their own weakness. The DRS believe they are not provided with a fair level of inputs and unfair distribution of resources from the centre. Judgements like "they do not go out and supervise, they do not take corrective actions and measures …." put a strain on regional offices, driving them to frustration. This makes communication and collaboration more complex and demanding. According to a development partner participant who observed the emotions:

> "This is one of the frustrations of the regions: they are insufficiently heard at the end of the day." 12

4.3.4 Perceived and empirically defined underlying factors

There are many perceptions of the underlying causes of child health inequality in Ethiopia. The findings suggest that policy makers and policy contents do not fully agree with independent researchers and the established theories on such causes.

Figure 4.4 summarises three groups of thoughts current among researchers and policy makers in regard to the underlying factors of health inequality in Ethiopia.

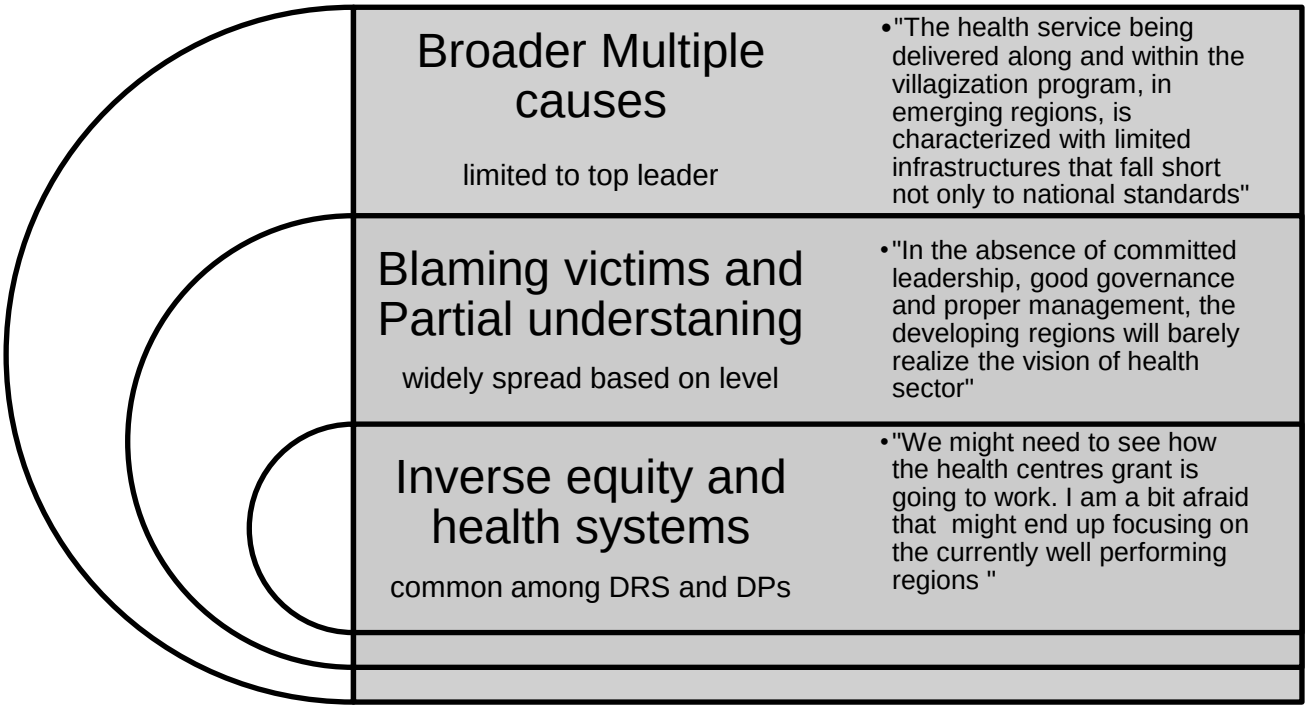


Figure 4.4 Views on the causes of child health inequality in Ethiopia

4.3.4.1 Broader causal factors and SDH behind the Ethiopian inequality argument

The findings suggest that while most policy makers focus on downstream factors, empirical evidence argue that multiple social determinants are the underlying factor for the Ethiopian inequality. Wealth inequality; ethnicity, and the dynamics between the leading party and its sister parties from the peripheries play a role as underlying causes.

Ethiopia is growing towards a middle-income economy by 2025. This suggests a growth to middle-income status in Africa has been accompanied with a growth in income and social inequality, which is probably the way Ethiopia is heading (Tsikata 2015:209). China also faced a rapid widening of health inequality as the country's economy kept growing fast (Fang, Dong, Xiao, Liuet, Liu,Feng & Wang 2010:20). Some participants understood that child health inequalities were caused by factors wider than health systems, while others partially understood the causes. Senior policy makers interviewed stated how the wealth inequality in Ethiopia is growing following the economic growth, in directions that government vowed to prevent.

> "We have seen it in Brazil, these countries are growing a lot and the fact that capital is being accumulated in a narrow circle left a lot of lot of people poor and unable to afford to health care and education. There is no reason that we won't be there." 3

Costa-Font, Hernandez-Quevedo and Sato (2017:1-14) maintain that as a country's economy grows, wealth inequality starts to widen and the more the growth becomes stabilised, income and social inequality gets reduced. Cost-Font et al (2017) found a relation between economic growth and health inequalities after analysing data from 70 countries. A per-capita income of above $26,000 was found to be the tipping point where widening social inequalities started being reduced (Costa-Font et al 2017:11). However, there are emerging counterarguments that Kuznet's theory does not always work and countries can achieve equity while growing fast.

As the Ethiopian economy keeps growing fast, wealth inequality plays a key role in child health inequality. Wealth inequality accounts for most of the explained child health inequalities in Ethiopia. It contributes from 13.6% of the total inequality in neonatal deaths to 84.8% of inequalities in coverage of basic vaccinations (Skaftun et al 2014:07-08). Memirie et al (2016:1) demonstrated how broader factors in the primary health care system affect inequalities in the utilisation of maternal and child health services in Ethiopia.

Despite their knowledge, senior leaders do not take action and/or provide guidance to their followers to address major underlying factors like wealth issues. This could be due to a need to comply with their supervisors and political leaders who prefer to intervene on easier downstream factors like clinical care. Alternatively, this could be due to a conscious choice to focus on low hanging goals and face inequality step by step using their limited capacity.

> "I believe it is the simple the factors (regional inequality) you can intervene on now …." Senior participant in FMOH, 1

An example of the lack of action is the absence of discussion on wealth inequality and its political economy in policy documents and during the interviews. The new *Health*

Equity Plan (FMOH 2016:18) is intended to “transform health status and health systems in the Developing Regional States and selected zones with suboptimal performance”.

Finally, participants stated that political factors appeared to be among the important components of SDH in Ethiopia. Participants maintained that political leaders in the DRS did not give priority to the health sector, which was reflected in limited commitment and accountability. Most participants agreed that health was a relatively low priority in the DRS, as leaders need to resolve stability, security, water scarcity and infrastructure. Also, due to the complex relations between the leading party and the DRS parties, health sector leaders spent a significant part of their time on political issues and working to get more visibility or effect at the federal level.

The political arrangement in Ethiopia can be called a coalition between the leading party and the parties leading the DRS. The leading party, the Ethiopian People’s Revolutionary Democratic Front (EPRDF) was formed by four major parties from the central highland areas where there is a high density of population. The EPRDF supported the establishment of the parties in government from the DRSs. However, all key party decisions made in the EPRDF do not involve votes from Non-DRS parties. The EPRDF has put mechanisms of controlling security, development and stability in DRS in place (Bekele, Kjosavik & Shanmugaratnam 2016:5-7). Historically, political power has always come from the two major parties of the EPRDF, but the parties from DRS are keen to have more roles in the central government. The regional health heads are part of the Cabinet that forms DRS governments.

Globally, following the 2008 WHO review of social determinants of health there is agreement that health inequalities are the spinoff from social, political and economic inequalities rather than simple difference in health systems (Nambira, Muralidharan,Garg, Daruwalla & Ganesan 2015:134). Tsikata (2015) undertook an extensive review of income inequality and its link to social inequalities in seven African countries including Ethiopia. Tsikata demonstrated what the general growing trend in income inequality in Africa looks like. The study found that income inequality became reduced in Ethiopia but social inequalities remained high (Tsikata 2015:209).

In a study in South Africa on the causes of mortality inequality, Nkonki, Chopra, Doherty Jackson & Robberstad (2011:9) found broad socio-economic factors affected child

mortality and HIV infection among the poor and the poorest. Similarly, based on DHS data analysis from five North African countries, Boutybe and Helemert (2011:13) found that health inequalities in maternal health care were mainly determined by place of residence, social, economic and environmental factors.

Ethiopia's top leaders have strong knowledge of broader factors, but that knowledge is weaker away from the small centre of leadership inside the FMOH.

4.3.4.2 Blaming victims and partial understanding of underlying causes

Blaming the victims for health inequality was observed and criticised in the 1970s and 1980s in Europe. Governments wanted to make the poor and marginalised responsible for their state of life and their health. This masked the need to address broader social, cultural, political and economic factors that are causes of the cause of health inequalities (Uphoff, Pickett, Cabieses, Small & Wright 2013:08; Watt 2007:1-5). The trend of putting individuals as the main guardians of their own health keeps resurfacing depending on the political landscapes operating (Watt 2007:2-5).

This study found that most mid and low leaders and policy documents had a partial understanding of the drivers of inequality in Ethiopia. The study also found a degree of blaming the victims and shifting responsibility. There was extensive use of "us versus them" language during the interviews. The federal state tends to blame the victims, that are the peripheral regional states, as the main cause of the inequality, due to lack of responsiveness and accountability. The FMOH argues that political and technical leaders in the DRS lack the capacity, commitment and interest to change the lives of the people living in these areas.

A further argument put forward was that the lifestyle and preference of people living in DRS led to health inequalities. This shifts the blame of failing to tailor health care to the needs and culture of people in the DRS by government to the residents in the states. Some participants maintained that residents in the DRS did not want to use modern health care services, which led to a relatively lower uptake of services and then health disparity.

> "Among the agrarians, they have stronger structures for mobilisation, there is a lot of persuasion work, the pastoralists are settled sparsely and they not that much worried [about their own health]." Senior participant from FMOH, 3

Participants from the DRS argued that this view was discriminatory and from groups that did not understand the lifestyle in the DRS. They maintained that the health care system was based on central Ethiopian lifestyles and imposed on the socio-cultural situations of their areas.

Apart from some top senior and development partner participants, most of the leaders lacked proper knowledge of what could be the underlying causes of health inequality in Ethiopia. The tendency to associate Ethiopia's inequality with downstream factors like health care delivery could hinder a sustainable and effective reduction of inequality in Ethiopia.

> "According to our analysis, the root causes are attitude, skill, organisational structure, lack of support and supervision." Senior participant in the FMOH, 4

At the same time, social-determinants like wealth inequality, security, unfair food distribution, and lack of targeted programming can form the root cause.

Other studies from similar settings found limited understanding of major over-arching factors of health inequalities. In 2016, Mtenga, Masanja and Mamdani (2016:2-3) found that despite the persistent or even worsening child health inequality in Tanzania, policy makers and researchers had little awareness of the role of broader SDH.

4.3.4.3 Inverse equity and unfair distribution of inputs to the health system

Participants from the regional health office and development partners discussed how inverse equity and unfair distribution resources played a key role in worsening inequality in Ethiopia.

> "We (DRS) don't start new initiatives and programmes together with other regions. The programmes come to our regions after they are implemented and results are produced in the other regions." Senior participant from DRS, 10

There are two dimensions to this argument:

- Unfair distribution of inputs for the health system. Key inputs that make blocks of health systems run, such as budget, staff, drugs and health facilities, are not fairly distributed between DRS and non-DRS.
- Inverse equity. New or existing interventions target and serve the richer and the advantaged regions first before reaching the neediest.

According to participants from the DRS, there is unfair distribution of inputs to the health system.

> "Everything [budget and drug supply] is calculated based on population size. Therefore, that supports my idea that we are not even receiving the basic support." Participant from DRS, 8

Regarding universal health coverage for reproductive health services in Ethiopia, Onarheim, Taddesse, Norheim, Abdullah, & Miljeteig (2015:11) found that the budget for health was distributed unfairly. Onarheim et al (2015:11) proposed a review of the national budget distribution formula that controls how much budget flows into regional states in Ethiopia. In this study, the DRS complained about unfair distribution of health facilities, budget, medicines, staff and technical support provide by NGOs.

> "There are a lot of issues, including how resources are distributed. For example, we don't have partners with good potential that can bring change in a short period of time." Participant from DRS, 7

The distribution of health care facilities in the DRS is not as dense as the national average and other regions. Participants stated that the national minimum standard on number of facilities per population did not work for the DRS, as the population was settled in a sparser pattern. However, the number of facilities was below expectation even according to current standards. A participant of the DRS stated:

> "There is still a problem in Somali region, the PHC coverage is not as other regions; we need to work on access. The other thing is structure, starting from

> the region there is no zonal structure. The region is so vast and even the available structure is not equipped with the appropriate human power." 6

The FMOH did not agree on the unfair distribution of inputs. The FMOH maintains that the DRS are receiving special support that is tailored to the special needs of these areas. According to a senior participant at FMOH,

> "That is why the federal government has started allocating a special grant to these areas. A grant of about 15 billion Birr (about $700 million) started 3 years ago." 2

However, some DRS participants did not think the "special support" was enough or relevant.

Inverse equity. The participants discussed inverse inequality extensively. A typical feature of health systems in the DRS is that they are far from the centre and placed in areas where electricity, roads and other infrastructure are worse. Remote facilities receive a lower supply of medicines, poor staffing and lower utilisation due to poor health seeking behaviours.

> "Does PFSA (the Central Medical Stores version of Ethiopia) distribute directly to your health centres? No, they don't deliver to remote health facilities." 10

This quote highlights the effect of inverse equity on remote areas where medicines are most sought but not delivered to sites, unlike advantaged areas.

There is a general feeling among the DRS and development partners that important initiatives and services go to the rich and populations living in better-off areas. A participant from the development partners reported how a hospital manager in the DRS complained about the inverse equity they face.

> "There is a concern I heard from Dubti [hospital in DRS] on the hospital award grant ... the award was given to hospitals that had much more budget than us. They performed better - at first, I was punished with a low budget, then I couldn't perform well and I was made to compete with the others for the same prizes like the others ... That is the system which makes life difficult." 11

4.4 UNDERSTANDING THE HEALTH SECTOR RESPONSE TO NARROWING THE INEQUALITY GAP

4.4.1 Perceived and empirical progress in the sector towards equity

The findings suggest that despite the latest spike in political commitment to health inequality, there is a perception that the existing response is too late and incomplete.

> "The great part of Ethiopia is once they decide to do one thing they will do it. In that sense, I would really appreciate if they could focus on equity and make it the agenda." Development partner participant, 12

Ethiopia does not have a written plan to address wealth inequality. The package of services that are designed for regional inequality are also perceived as based on the values and lifestyle of "highlanders" which does not fit the values and lifestyle of the semi-pastoralist communities in the DRS.

Ethiopia has recorded impressive gains in improving the national average and slightly reducing some of the severe inequalities in child health over the last twenty years. The findings suggest that Ethiopia could reduce the urban-rural division of child health inequality faster than regional inequalities, while the wealth inequality might have worsened. However, the level of inequality and the absolute number of children dying are still very high (Ayele & Zewotir 2016:03).

Since 2000, Ethiopia had been recorded an impressive scale-up of services at national level (Balabanova, Mills, Conte, Banteyerga, Dash, Gilson, Harmer, Ibraimova, Islam, Kidanu, Koehlmoos, Limwattananon, Muraleedharan, Murzalieva & Palafox 2013:2121). All quintiles registered gains, but the distribution of gains in the expansion of services was not uniform. The poorest section recorded gains in almost all indicators except in early breast feeding, DPT3 vaccination coverage and ORT. From a very low-based SBA and CPR of 0.5% and 4.2%, the coverage of these services grew 10.0 and 6.7 times between 2005 and 2014. Please refer Table 2.1.

4.4.2 Understanding interest groups and institutional contexts

The Ethiopian government through the FMOH has demonstrated renewed interest in discussing and intervening in health inequalities in Ethiopia. The new Constitution, establishment of federal states, empowerment of local ethnic groups and their leadership have led to achieving the MDGs and improving national averages. After a long silence on health inequalities during the implementation of the health sector strategic plans of HSDP 2, HSDP3 and HSDP4, the FMOH increase focus and openness to address inequalities through the new HSTP that was introduced in 2016. The FMOH also released a draft Equity Action Plan, 2020 in 2016.

This study found indications that the FMOH and other interest groups/stakeholders are generally excited to enhance the response to reducing regional inequality. There is an established global framework that outlines how networks and interest groups affect policy setting and implementation process. Shearer and colleagues (2016:1202) summarised the importance of the right kind of networks and groups and interactions in the design and implementation of health policies. There is also a risk of small groups controlling the whole process and excluding views from other interest groups (Exworthy 2008:323).

A drive by a small elite group, which is largely top-down appears to control the current policy setting and implementation environment of Ethiopia. The following sections summarise the interests and interest groups that affect health inequality interventions in Ethiopia.

4.4.2.1 Interest groups that directly affect equity policy making

The energy, direction and technical guidance for the reduction of equity comes from smaller groups of high level leaders in the FMOH and may not be broad based. The study found broadly three other interest groups that directly or indirectly affect heath equity decision-making. The results of triangulation with multiple respondents suggests that while most stakeholder agree to reduce the inequality, there are different views and groups that do not fully agree. Figure 4.5 illustrates the interest groups.

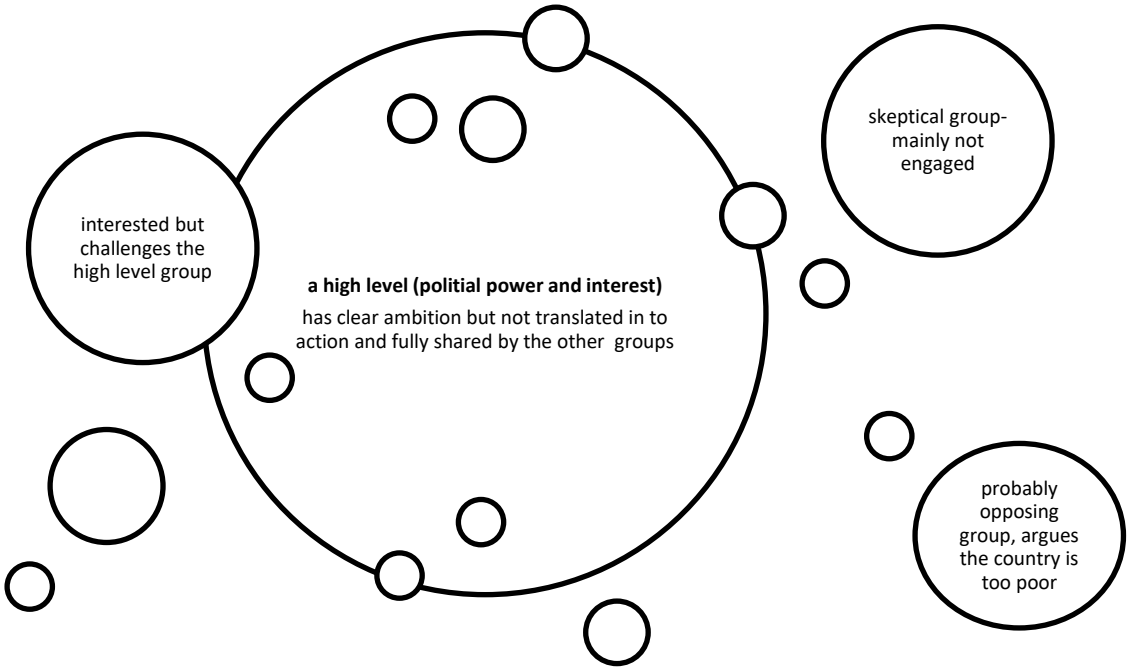


Figure 4.5 Interest groups that can influence health equity decisions in Ethiopia

The first group is very powerful and strongly motivated by political factors, and is comprised of ministers, selected directors, and regional top leaders. There is a growing strong political interest that is perhaps less linked with the technical leadership and scientific priorities. The level of commitment and enthusiasm among the top leaders of the FMOH is high. According to a development partner participant, *"The Minister himself made a personal ambition to achieve this."* The Ethiopian government did ministerial reshuffling that established a Ministry of Federal Affairs and pastoralist development that added more political solutions to broader geographical inequalities.

> "By the way, we are a special sector as ministry for health; we have received a directive from the Federal Affairs Ministry to increase equity." Key participant, 2

This group has political leverage and the capability to introduce a stronger accountability and direction. However, the group is engaged in providing detailed technical guidance without broader participation and narrowing space for innovation by the technical team and development partners.

> "… [the FMOH] produced the draft document based on the direction … received from the minister." 2

Political decisions taken at the highest level in Africa may not materialise, due to several factors including: lack of proper assessment; limited preparedness of the system and availability of funds (Ridde & Morestin 2011:4). Ridde and Morestin (2011) explored 20 studies to understand what had been driving similar major policy decisions in abolishing user fees. User fees became unpopular and countries abolished them without complete preparation and readiness. They found that most policy decisions for abolishing them were taken during election campaigns or during a major political change like post-apartheid in South Africa. Running presidents made a quick policy decision for abolition in Uganda and Ghana that ultimately could not be implemented (Ridde & Morestin 2011:4).

The second group consists of the technocrats that design and implement programmes at central and regional level. This group is also interested in reducing inequality but thinks the elite leaders mentioned above are mainly interested in fulfilling political requirements; and some of the political leaders' intents are more rhetoric. Some think views from lower level leaders are not well considered.

> "The national commitment for reduction of regional gap is good. The plan is good but I have a lot of doubts … The execution and the intervention don't match the level of what people talk about and what is written on the paper." DRS participant, 8

> "I don't think the appetite (by FMOH) for equity is strong." Development partner participant, 11

The third group is not directly engaged in equity works and occupied with other priorities. Some of them are development partners with specific technical and thematic priorities and others are based in other regions where the progress in primary health has been impressive.

The final group which did not emerge clearly and strongly is a group that believes the country does not have the budget and resources to significantly reduce inequality. This group maintains regions and communities that have progressed well should not be made to stall in progress and await DRS. There is a need to expand advanced clinical care, cancer treatment and tertiary care.

Shearer (2016:1204-1205) describes the importance of an advocacy network or group that could drive the right policy setting for health inequality; however, this study could not find that kind of organised group for heath equity in Ethiopia.

4.4.2.2 Factors driving current response

Two main arguments emerged from the participants as the chief motivation factors for the current surge in interest in inequality: technical and political factors (local/ international). A mix of these factors has possibly been driving the motivation behind the current enhanced openness and interest by the government.

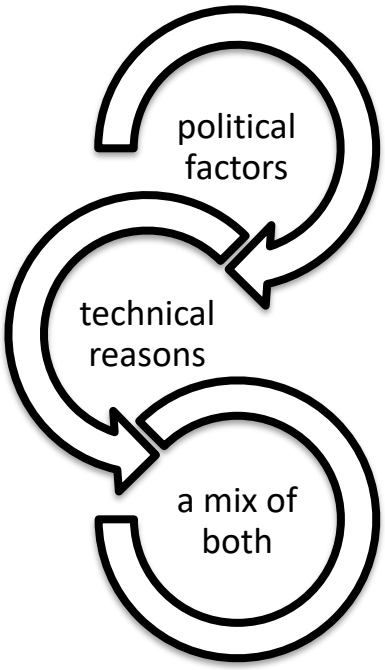


Figure 4.6 Interests and factors driving current equity response

Figure 4.6 indicates that some participants felt the motivation of the FMOH is mainly political. There is probably an internal political pressure which aims at reducing political tension arising from broader inequalities among members of the leading party. The internal pressure was possibly further compounded with the effects of the recommendations from the review of progress conducted by the leading party over the last 25 years.

> "There are a lot of threats. The biggest one is the level of wealth distribution, which is highly affected by the failure of both the market and the government." Senior participant from FMOH, 1

It is noteworthy that the FMOH's new surge of interest in inequality came in advance of the 2016 Ethiopian civil unrest, which some attributed to broader inequality-related grievances. The outcome of the unrest led to a cabinet reshuffle, which replaced the Minister for Health who was the prime champion of the equity issues in 2015 and 2016.

The participants maintained that the political pressure also comes from global commitments of human rights, MDGs and SDGs. The new *Equity Action Plan,* (2016:7) states:

> "This is clearly put on health declaration by WHO in 1946.Then after, equity in health service has been mentioned being part of human rights in different international agreements and declarations like the 1948 United Nations human rights declaration; the 1976 International economic, social and cultural rights agreement."

The other drivers for the new interest could be a mix of technical reasons and political priorities. The participants stated that technical reasons like a persistent under-performance of DRS in service provision might have stimulated the new interest. This could be another factor that put energy into the political drive.

> "There is a pain every year as those from the emerging regions end up with very low performance … if they can be able to improve that, it gives comfort for a lot of people." Participant from development partners, 12

4.4.2.3 Institutional factors that affect equity policy

The study found that several institutes are directly and indirectly involved in equity interventions in Ethiopia. A Parliamentary Committee for Pastoralists along with a board of minsters provides oversight on broader DRS issues.

"We send quarterly reports to Parliament; they do their own supervision. The State Minister for Health reports to the Parliament, we get evaluated based on that." Participant from FMOH,3

Figure 4.6 summarises the hierarchy and role of key institutes.

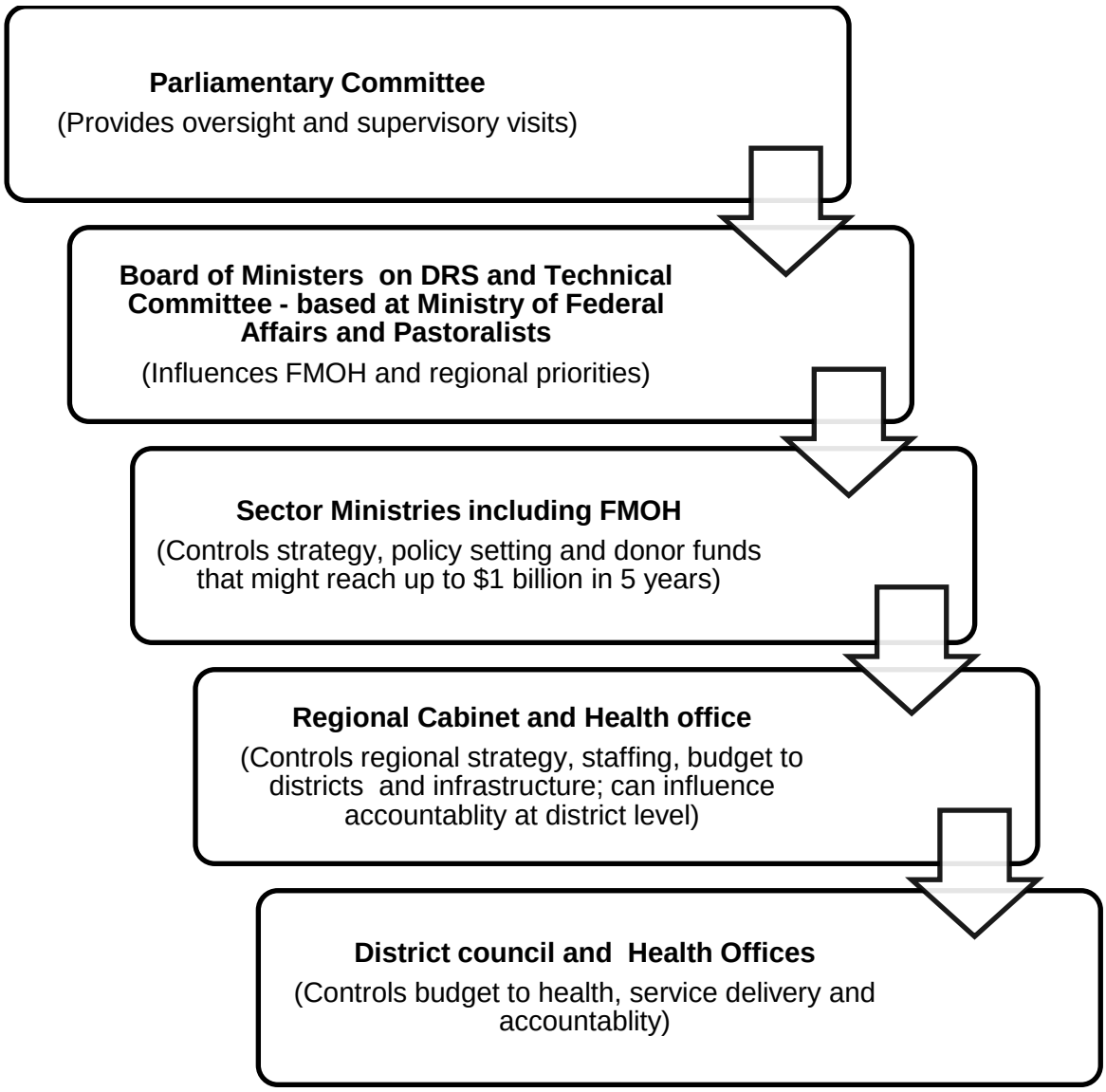


Figure 4.7 Major public institutes that influence the health sector

While the interest from the Parliamentary Committee and the Board of Ministers is very instrumental, the division of role and link between these structures is not clear. The Ministry of Federal Affairs provides guidance and oversight to Ministries like the health sector. The FMOH provides reports to both parties; both parties provide guidance and supervision to the FMOH.

The role of regions and the federal government is clearly stated in the Constitution and subsequent guidelines. However, due to capacity limitation and gradual decentralisation, the role of regions, federal government and districts is still developing and taking shape. The lower most powerful political structure is at district level, where the budget for each sector is mainly defined. The total per capita budget for health from public funds is primarily decided at district level, by the district council whose members are elected during elections. According to a participant,

> "I mean, I cannot say the budget is benefiting the health sector at this point ... because it depends on decision of the *woredas* (districts)."

The federal government through the FMOH has highly trained experts, large grants from donors and political leverage in the Cabinet and other resources. The FMOH uses mainly donations to introduce equity interventions. The main donors decided to channel their grants, which could total $1 billion between 2016 and 2020 (FMOH 2014b: 80). A portion of these funds can be utilised for equity. The regional governments have the power to decide which interventions to adopt enhance accountability and allocate more budget.

4.4.2.4 Dynamism between DRS and federal government and working as a team

The study found that reducing geographic inequality and introducing accountability with a centralised approach is proving to be a complex exercise in Ethiopia.

> "There is quite a lot of frustration at regional level about the FMOH, because of insufficient support for the wishes made on the table and for not being heard." Development partner participant, 11

All the participants interviewed know the constitutional roles of the federal government and the regions. Translating that framework into a joint team effort of equity reduction is challenging. The technical role of regions, the central government, districts and development partners is not completely defined. Communications are not always clear and smooth between DRS and FMOH. The capacity at district level is low, which then makes the regional offices centralise decisions and control the whole process.

Linked with the paternalistic approaches and shifting the blame to the DRS, there is increasing reaction from the DRS. The FMOH feels a sense of resistance emerging from this reaction:

> There are issues linked with ethnicity. Whenever other people are sent out to help them, there are issues and sometimes confrontations.

The FMOH feels that DRS leaders do not give priority to what the FMOH asks them to do, and central level guidelines are not implemented but just kept on the shelf. The FMOH has the visibility on district level data and the progress being made, but cannot directly become involved in internal issues of district performance and accountability management.

However, some staff from the DRS felt unheard, undermined and not engaged in major decision-making. Some DRS staff felt that the response from the FMOH does not empower the local experts.

> "They (regions) are being pushed now. I don't think they want to consider it (list of recommended interventions) though." Participant from FMOH, 3

The frustration and reaction could result in non-productive relations and affect the progress of joint equity interventions.

> "We are working as much as we can but beyond that we (FMOH) cannot order them (RHB) to do some things. We are negotiating and working through diplomacy. You cannot change things as you want. We want to agree on the problems, we have to develop an action plan by involving them." 3

The DPs did not feel meaningfully engaged but felt that major decisions were made in a very small circle and DPs were only meant to hear these decisions. According to a participant,

> "There are still issues in the Health Extension Programme that need improvement and we don't talk about it." 11

The researcher found little research based on similar political structure and health inequality. A study from another federalist country, India, supports the findings that a top-down approach can result in less comprehensive equity policies. Gopalan, Mohanty and Das (2011) reviewed the relations between the Indian federal state, Orisa state and its districts in equity policy setting, implementation and evaluation. The federal state in India demonstrated the same tendency of imposing federal interest and institutional ideology on equity policy agenda setting (Gopalan et al 2011:55). The outcome was a less complete proposed list of interventions that have not fully considered the background context of ethnic lifestyle in Orisa state.

4.5 POLICY CONTENT AND PROCESS IN VIEW OF INEQUALITY

This section presents the findings from the review of the contents of the relevant policy documents that guide equity response in Ethiopia. Perceptions, acceptance and reflections on the content and the process of policy development are also included. Specific views of policy makers on the feasibility of adopting selected high impact interventions as policy options are discussed in the next section.

4.5.1 Policy and response to inequality

The findings from this study suggest that Ethiopia is in the early stages of systematically organising its response to health inequalities. The content analysis and interviews suggest that the policy documents are prescriptive, paternalistic and based on the socio-cultural basis of the central highland areas. The processes taken have not been as inclusive as they could be. The quality of data and root cause analysis are mainly based on government-owned data sources. Independent studies and peer reviewed products were not utilised in the policy development. Finally, all the documents reviewed fail to propose clear strategies that could reduce wealth inequality in Ethiopia.

Most African countries do not respond to their inequalities in a systematic and direct fashion. However, in 2016 42 out of 46 African countries had committed to UHC in their policy documents (Cotlear 2016:3). The Ethiopian FMOH has increasingly become progressive and open on addressing inequality as a policy issue. Ethiopia just produced its first draft Equity Action Plan in 2016. In the past, equity was addressed indirectly through the Constitution, health policy and five strategic plan documents.

The findings from this study suggest that the policy and total response have been slow and were focused on improving the national average rather than inequality reduction. Similar trends were observed in other LMICs. King, Harper and Young (2013:558-571) found that leaders in LMICs were motivated to raise the low life expectancy and improve availability of basic care rather than inequalities. Meanwhile European countries and others had achieved high life expectancy and high GDP, which provided them more space for prioritising inequalities and protection of financial hardship (King et al 2013:558-571).

Figure 4.8 summarises the policy framework and type of policy documents that directly affect child health and child heath inequality. The quality of response, content and use of this guide will be presented in the next sections.

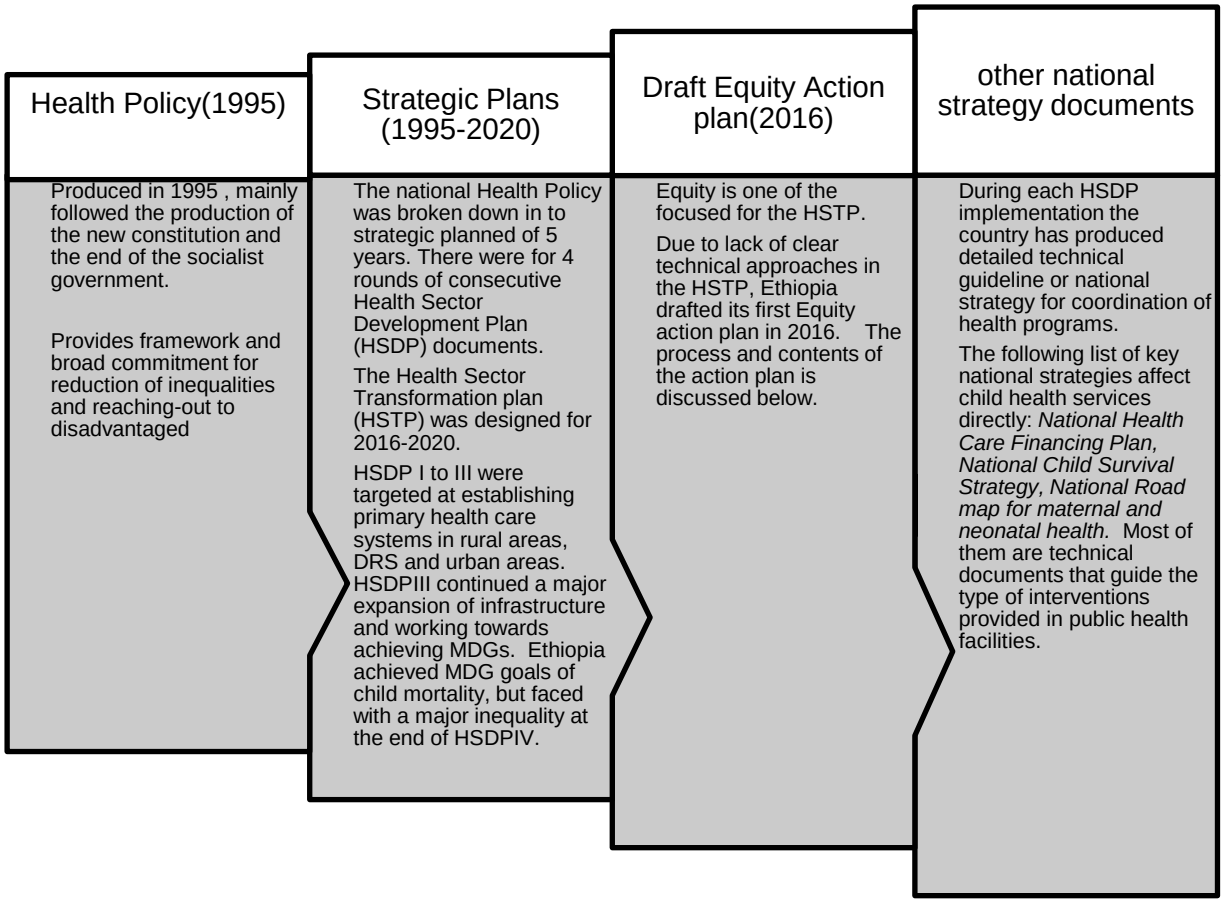


Figure 4.8 Illustration of policy framework and strategic contents of relevant documents

4.5.1.1 The Equity Action Plan, its content, development and implementation

The Equity Action Plan is the only document that has a direct focus on health inequalities in Ethiopia. The major drawback of previous strategic plans and documents was the failure to present the “how” and the major strategies that could tackle inequality. The *Equity Action Plan, 2020* (FMOH 2016), drafted in 2016, is the main document that is responding to this drawback. This development is a major step forward in providing a framework to reduce health and child health inequality in Ethiopia. Previous ad hoc guidelines issued from the centre to scale up programmes that worked in non-DRS have not been fully accepted or operationalised by DRS.

A search of websites of African ministries of health indicated that production of a focused equity action plan was not common practice. Ethiopia has made a bold move in trying to address equity through the EAP. The EAP has paternalistic one-size-fits-all features as it was built on strong views from the central government. It was developed from limited consultation with the DRS and global evidence base. Development partners are also worried about the inflexible one-size-fits-all model of expanding Health Extension/Women's Development Army approach as a solution for equity.

> "It [Health Extension Programme] is not efficient, but we don't discuss about these issues, by keeping it sacred. We did not discuss its failure in the emerging regions [DRS}. The further away from the centre, it is difficult to motivate people to come to health centres." Development partner participant,11

Furthermore, the one-size-fits-all approach in the EAP fails to add strategies that are based on local clan and social structures of the DRS. A mid-level FMOH participant highlighted the importance of local structures as *"if you want to change in short time we have to involve the clan structure".* Part of addressing regional inequalities requires the use of local social, cultural base rather than transposing interventions from other cultures. The following excerpt from the EAP (FMOH 2016:10) indicates otherwise:

> "Access to health information and primary health care through HEP have been achieved. This is one of the stark achievements in the bigger regions which have to be adapted to these developing regions."

Other reflections on the content of the EAP are presented in section 4.5.1.1.

The Equity Plan was mainly developed by a small team in the FMOH, the Directorate of DRS Health Systems Strengthening and top leaders. Through guidance from the Minister for Health and the director of the directorate, a small team completed drafting the action plan. After completion of the draft action plan, the FMOH invited participants from regional health bureaus and selected development partners for 5 days in 2016. RHBs from the DRS were invited to provide comment on the draft.

> "What we did was … produced the draft document … Based on that we called all the regions including the pastoralist. We discussed on the document." Senior participant from FMOH, 3

This process is deemed highly centralised in which the solutions and analyses of the situation were done in a top-down approach rather than building on initiatives that come from the DRS or other affected populations.

The researcher found few studies conducted on health policy and inequality in Africa. In India, a federal state like Ethiopia, Gopalan and colleagues found that policy makers left out marginalised leaders from districts. While India managed to set impressive policy goals, the result of the policies omitted broader interventions that affect equity, including financial protection (Gopalan et al 2011:55).

4.5.1.2 Reflection on the contents of the Ethiopian Equity Action Plan 2020

The Equity Action Plan has a list of interventions to improve the performance of health systems in the DRS. The main drawbacks of the EPA were lacking comprehensiveness and addressing the impact of wealth inequality and demand-side intervention. Moreover, the findings revealed that the proposed interventions are a simple scale-up of interventions from central highland. They exclude the introduction of structural responses known to work in other countries. The attitudes of the policy makers to these interventions are reported in section 4.6.1. This situation made the equity plan look more like a copy of the general *Health Sector Transformation Plan* (HSTP 2016-20) than an equity response.

The *Equity Action Plan* (EAP) has four major sections: background, situation analysis, root cause analysis and nine strategies. The proposed interventions are based on a health systems model rather than broader social determinants. It misses the focus on demand-side factors like demand creation, empowerment and social accountability. It also missed in-depth discussion and a proposed list of interventions to reduce the most important dimension of health inequality in Ethiopia which is wealth inequality. The main strategies outlined to resolve health inequalities include:

- Enhance leadership, governance and management
- Improve human resource development and administration
- Improve health infrastructure
- Improve supply chain and logistics management

- Enhance resource mobilisation, health care financing and synergy with partners
- Provide equitable access to quality health care services to improve health outcomes
- Enhance community participation and engagement
- Improve resilience to prevent and manage health emergencies
- Improve research and evidence for decisions

Most of the study participants could not discuss and comment on the EAP, partly because it is a recent phenomenon. Staff from the regional offices confirmed they had participated in a consultation workshop.

4.6 ACCEPTANCE OF WIDER EQUITY INTERVENTIONS BY POLICY-MAKERS

Tsikata found African countries intend to reduce general income inequalities in a structured way, which might reduce social inequalities. The United Nations Economic Commission for Africa (UNECA) has been supporting multiple African countries to develop plans that can facilitate equitable economic growth. Unlike the Kuznets theory, countries have started introducing structural changes in their economies to introduce an earlier fair distribution of social benefits. The lessons from Latin America's social protection, urbanisation, economic transition from agricultural and redistribution of gain are potential interventions in Africa as broader solutions of income inequality (Tsikata 2015:220). As stated in section 4.3.5.1, Kuznet's theory holds income and service inequalities widen as countries start to grow in economy.

This study assessed the level of understanding, attitude and acceptance of popular health equity interventions: targeted programming, health equity funds; social protection and, health in all approaches other. Broadly, there is a lower awareness; negative political view and attitudes against these interventions. Multiple reasons: including financial sustainability, ethics, and effectiveness were provided to reject wider interventions for Ethiopia. This reaction is despite the growing level of literature and global lessons. Relevant quotes are captured in table 4.1.

Furthermore, a deep analysis and questioning in to these attitudes hints three major factors are probably playing roles among policy makers. These factors are: technical capacity issues; limited engagement of victims of inequality; and the preference to be

politically correct or denial. The definition of denialism includes a denial of effectiveness of intervention or challenging the relevance of studies, without strong evidence based to argue otherwise (Diethelm & McKee 2009:2). Negative attitudes by policy makers are probably coming from their political ideology, which comes from a single dominant party. Despite being founded in socialist features; it appears that the political economy tends to limit a wide use of redistributive justice interventions. Redistributive justice interventions include un/conditional transfer of assets, targeted incentives and programming.

Some reasons were provided to justify the current position of policy makers. The participants hinted that most top leaders were worried about the financial sustainability of introducing such interventions.

> "Actually, as a policy this creates dependency and is not sustainable". 4

> "For example, if we use public funds it will be challenging as the demand starts to increase and the cost gets high." Senior participant from FMOH,1

According to the national health accounts survey in 2012, 50% of all health expenditure in 2012 was financed by donors (FMOH 2014a:15-17). The government feels that it does not have the funding to cover wider initiatives, despite a reported economic growth of above 10% every year. However, there are major infrastructure and industrial development investments being undertaken by the government. Therefore, a large-scale structural response through redistributive justice might require the use of donor funding.

Sustainability of the external funds is linked to the political relations of the Ethiopian government and the donor countries. The current political economy does not encourage empowering citizens using donor funds, which might put government at risk if these funds should dry up. A resistance of not introducing demand-side incentives using foreign funds may ensure that the relations and power balance between government, the public and civil servants are not affected by a sudden withdrawal of funds. It appeared that there was a perceived lower risk of not introducing redistributive interventions rather than using donations for such purposes.

Development partners do not accept or “buy into” the sustainability argument. They maintain that Ethiopia requires a transitional period which can be partially funded by the growing economy and donors.

> “We don’t have to sustain everything; certain things are to bridge the gap, until that time.” 12

Provision of social protection can reduce as the inequality is reduced and chronically repressed communities come out to claim their rights.

However, not all the stakeholders have negative attitudes towards redistributive justice and structural interventions. Key participants from regional offices and development partners have an interest in these interventions. Development partners are also interested in targeted programming. Section 4.6.1 summarises the specific attitude and acceptance of each form of distributive justice that was found to be working globally.

Limited engagement of victims and paternalist views go all the way from problem identification through policy option choices and implementation. Participants from the FMOH maintain that communities and health workers in the DRS will develop dependency syndrome if provided with incentives/assets. In spite of DRS leaders’ positive views of these interventions and the disproportional burden of poverty in DRS, policy makers from the centre make paternalist prescriptive decisions from their own perspectives.

> “This is coming from people sitting in Addis in the Ministry with easy access, with opportunities to travel abroad, which is also unsustainable; people don’t see how others are living in difficulty.” Participant from development partner, 11

4.6.1 Acceptance of Child Health Equity Funds as policy options

The attitude of policy makers to the feasibility and applicability of providing financial or non-financial incentives to mothers who use health facilities for children and are poor or live in DRS was assessed. In terms of Health Equity Fund (HEF) Interventions, a pool of funds should be established to finance eligible mothers, with the intention of reducing fear of indirect costs and medical expenditure incurred by the poor and marginalised.

Most of the participants rejected health equity as an option, including a proposal to reimburse transportation expenses. Only participants from DPs and DRS tend to show positive acceptance to Health Equity Fund interventions. Components of politically correctness and technical capacity could have contributed to these attitudes (see table 4.2).

The federal government prefers community-financed demand-side incentives rather than public or donor funded programmes. The share of health expenditure by households is already among the highest in Africa, as households pay 25% of all health care expenditure (FMOH 2014a:15-17). This might make community financed options less feasible.

In Ethiopia, few projects attempted to implement parts of health equity in the past. Through these programmes, HIV-infected mothers were provided with gifts like baby food and sanitary packs when they delivered in health facilities. The FMOH officially rejected these awards and discouraged a further scale-up of the programme. Discussions on the re-introduction of these initiatives have stalled and are considered sensitive. The government took the concept and implemented it, but using funds from the community. The FMOH and regions in the central highland are piloting awarding mothers with food when they deliver at health facilities. However, the food will be collected from the communities, while over 12 million Ethiopians were under food assistance in 2016.

The positive global experience of social protection, conditional and unconditional cash transfer in the context is summarised in Chapter 2, section 2.7.3. However, despite the emerging success in Brazil, Chile and other Latin American countries, Obuaku-lgwe (2015:96-131) found in South Africa (RSA) that these interventions should not be taken for granted. In a review of several studies, Obuaku-lgwe found that the post-apartheid social grants to ethnic Black South Africans had not reduced health inequality significantly. This emphasised that social protection alone is not the silver bullet. Obuaku-lgwe (2015:96-131) maintains that lack of proper change in the health system architecture and due to other policy issues, social grants only could not reduce health inequalities in SA. Mayosi and Benatar (2014:1352-1353) found that despite HEF and other initiatives, due to a lack of comprehensive response that addressed key social determinants of health, inequalities persisted in South Africa.

4.6.1.1 Acceptance of conditional or unconditional transfer of assets and cash as policy option

The study found conflicting views on this option. The FMOH rejects it as an option.

> "Introducing cash transfer in social behaviour is going to distort the value for health." Senior participant from FMOH,2

> "The other regions have safety net programs [cash transfer]; we [DRS] don't have one. That kind of initiative needs to be linked with the health sector's equity response." Senior participant from DRS, 7

Ethiopia has one of the largest programmes in agricultural livelihood which is taken as a social protection programme. The country has in average 3 to 5 million households in structural food insecurity, requiring food support every year. The Productive Safety Net Programme (PSNP) was designed by the World Bank, other donors and the government of Ethiopia to resolve this crisis. The donors and the government made a requirement of joint funding, joint identification of the poorest households and provision of conditional grants. This major initiative covers 7,997,218 individuals throughout the country. The key informants at public offices are not aware of this programme (World Bank 2016).

The study appraised the acceptance of providing conditional or unconditional health grants to poor households. Like other demand-side incentives, this policy option was widely rejected, but some DRS leaders see the benefit of it. Similar concerns of control, dependency syndrome, sustainability and effectiveness were raised for rejection. A different view of ethical concerns was raised, maintaining that it is not ethical to attract the poor through conditions and incentives. Table 4.2 summarises the findings under this policy option.

Table 4.2 Attitudes and quotes from policy makers on policy options

Categories of attitudes reported	Relevant quotes
Negative attitude – behavioural dependency and sustainability arguments	"However, if we give cash and encourage the community to take services for that – they will not understand the real benefit of the programmes." "It is like you are giving a chocolate for your kid for eating her breakfast every day. The issue is what about if you don't have the chocolate one day? That is the biggest." "For example, if we use public funds it will be challenging as the demand starts to increase and the cost gets high."
Negative attitude – due to political ideology	"Me, I am among those who don't support these kinds of initiatives. Number one, we will get unfavourable results during performance reviews." "In Ethiopia, we use our own money; we don't use grants to pay salary, that is very sustainable way. As far as the government exists and the economy is ok, things are not going to go wrong. But introducing such a type of grant specially from aid is going to violate this principle."
Negative attitude – ethical issues and behavioural change argument	"It is like you are giving a chocolate for your kid for eating her breakfast every day. The issue is what about if you don't have the chocolate? That is the biggest ... The second one is it appropriate to show her a Choco to make her eat. It is an ethical question, what we believe is we have to convince people to come to facility." "Our ideology is people should be convicted, people should be able to promote their own health and control their health."
Positive attitudes and recommendations to build on the existing national social protection programmes	"So I am not in favour of providing blankets and incentives through health centres, I think we have to do proper social protection, like PSNP and proper health systems." "The other regions have safety net programmes; we don't have one – that kind of initiative needs to be linked with the other sectors equity response."

4.6.2 Acceptance of HR and other retention grants in marginalised places as policy options

The HR retention grants are special funds established to provide extra incentives to health workers working in remote marginalised areas. The HR retention grants are provided on top of salaries and issued on completion of certain length of stay in marginalised communities.

The establishment of HR grants and monetary incentives to retain staff in DRS was largely rejected from the point of sustainability by a federal level participant.

> "When it stops at some level, it is an issue, Ethiopia is big with low capital and cash base, people were not paying tax properly. So, how can you design (in resource-constrained public sector) additional incentives that might not be sustainable?" Senior participant from FMOH, 1

Central government in Ethiopia believe there is already a working HR incentive mechanism that favours the DRS. They maintain health workers need to work in the DRS areas shorter than other areas so that they can qualify for further education and urban posts. Due to this, some leaders argue that the HR situation is improving in the DRS.

4.6.3 Acceptance of multi-sectoral response and working towards Health in All

Health in All (HiA) is the most comprehensive response to health inequalities. It integrates consideration of health as governments provide services that affect people's health and well-being.

HiA is probably the most accepted method by the FMOH and DRS. The level of understanding of HiA, however, is very low. The how and where to start are not known.

> "Actually, in our health policy we have it, but the implementation is not very clear and the how to needs strategy." Midlevel participant in FMOH,5

Generally, there was a positive view of multi-sectorial integration for HiA.

Another popular version of HiA in pastoralist communities is the ‘One-Health’ approach. It promotes integration and shared use of resources across public and veterinary medicine systems (Ruegg, McMahon, Hasler Esposito, Nielsen, Ifejika, Speranza, Ehlinger, Peyre, Meneghi, Canali, Filippitzi, Goutard, Ilieski, Milićević, O’Shea, Radeski, Kock,R, Staines & Lindberg 2017:20-21).

There is an acceptance and positive view of One-Health approaches among pastoralist communities by DRS representatives and technical advisers.

> *“*We can develop a new service package for animal doctors for like preventive and simple treatment of malaria. But we need to develop a new package and revise the current package - we can also train volunteers to integrate both animal and human health. Also, we need to integrate information systems.” Mid-level participant at FMOH, 6

Through the One-Health approach, there would be an integration of services between veterinary and public health care provision and research. There are several examples of health in all approaches that work in similar semi-pastoralist contexts (Gyles 2016:345-6). However, the Equity Plan advises settling semi-pastoralist communities in villages and strengthening health systems in a fashion that works in other parts of Ethiopia.

4.7 CONCLUSION

This chapter presented the findings and observations from the first phase of the study. The results and discussions were presented from the Critical Interpretive Synthesis of interviews, policy contents and literature. The results from the second phase, which are guidelines to facilitate inequality reduction in Ethiopia will be presented in chapter 5.

The findings conclude Ethiopia has a very high rate of child health inequality. The level of awareness among policy makers varies widely, reducing as we go lower in the administration. There are negative attitudes, misconceptions about inequality, and denial of the importance of wealth inequality. Chronic unfair distribution of social determinants, inverse equity and lack of a relevant policy might have contributed to the inequality or a slow reduction thereof.

Ethiopia has recently put a focus on health inequality reduction. Policy setting is highly centralised and perceived to be less inclusive and less relevant to the poorest and people living in the DRS. There is a general rejection and denialism of the role of demand-side interventions that have been found to empower the marginalised in other countries. Institutional relations and interest groups were found very important for health equity-related policies and their implementation. The relations of political parties, top-down relations of FMOH and regional bureaus are probably affecting the quality of policy and progress made in equity reduction.

CHAPTER 5

A GUIDE TO FACILITATE CHILD HEALTH EQUITY IN ETHIOPIA

5.1 INTRODUCTION

This chapter presents a list of proposed interventions and technical approaches that can assist to facilitate the process of reducing child health inequities in Ethiopia. The content of this chapter can be used to complement other works and policy documents.

The main framework of the guide is based on the results of the critical synthesis of interviews, and policy and literature reviewed. The main critical issues identified during the data analysis were selected for further processing and development of this guide.

5.2 DEVELOPMENT PROCESS OF THE GUIDE

The development of the guide was part of and linked to each step of the study. However, the main part happened in the second phase of the study. Three majors steps were involved: conceptualization, development of guideline; validation and finalization. Conceptualization and heuristics basis of the guide were developed during the first phase of the research. The outcomes of literature review, interviews and policy analysis have been presented in the previous chapters.

Key sections of the guide were drafted after conceptualisation of the findings and blending with recommendations from international agencies, like the World Bank and the WHO. A summary of cause and effect relation among proposed interventions, also known as Theory of Change, assisted the researcher in constructing draft the guide. Theory of Change is a not a scientific theory or framework, but it is collective name for the process of describing relations like cause and effect among list of proposed activities towards certain results. In this guideline, Theory of Change is used to indicate how proposed intervention can lead to reduction in health inequality.

Once the draft contents of the guide were produced in accordance with best practices, experts were consulted for validation. The panel of public-health experts included the

research supervisor, academicians, program managers, technical advisors and ministry of health staff in Ethiopia. The feedbacks from these experts were considered to enhance feasibility and validity of the guide. With further guidance from the research supervisor and literature review, the document was refined and finalised.

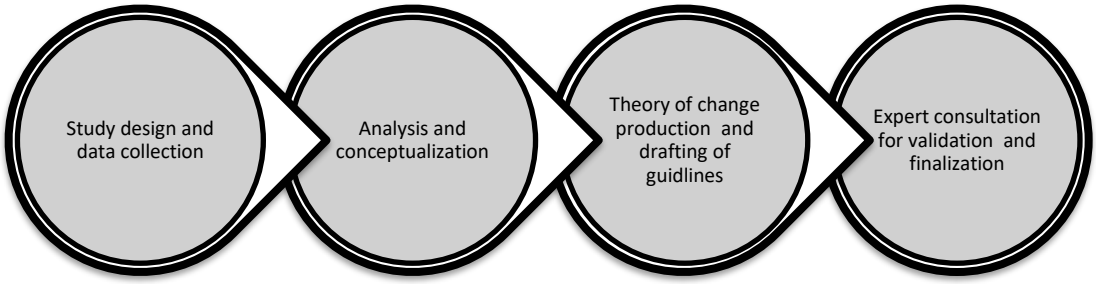


Figure 5.1 Main steps in the production of the guide

5.3 HEURISTIC ARGUMENTS IN THE GUIDE

The heuristic argument for this guide came from two st**r**eams of established conceptual frameworks: health policy formulation and causes of health inequalities. Recommendations on interventions that could work were derived from the literature reviewed.

Moreover, all the arguments are grounded in the CIS findings. The main argument is that Ethiopia has a very high child health inequality, which is not fully understood and by policy makers and lacks their intervention. There are many causes and the current response is affected by low awareness, less functional structures, and a response based mainly on supply side of the health systems. Figure 5.2 illustrates a theory of change to facilitate child health inequity in Ethiopia.

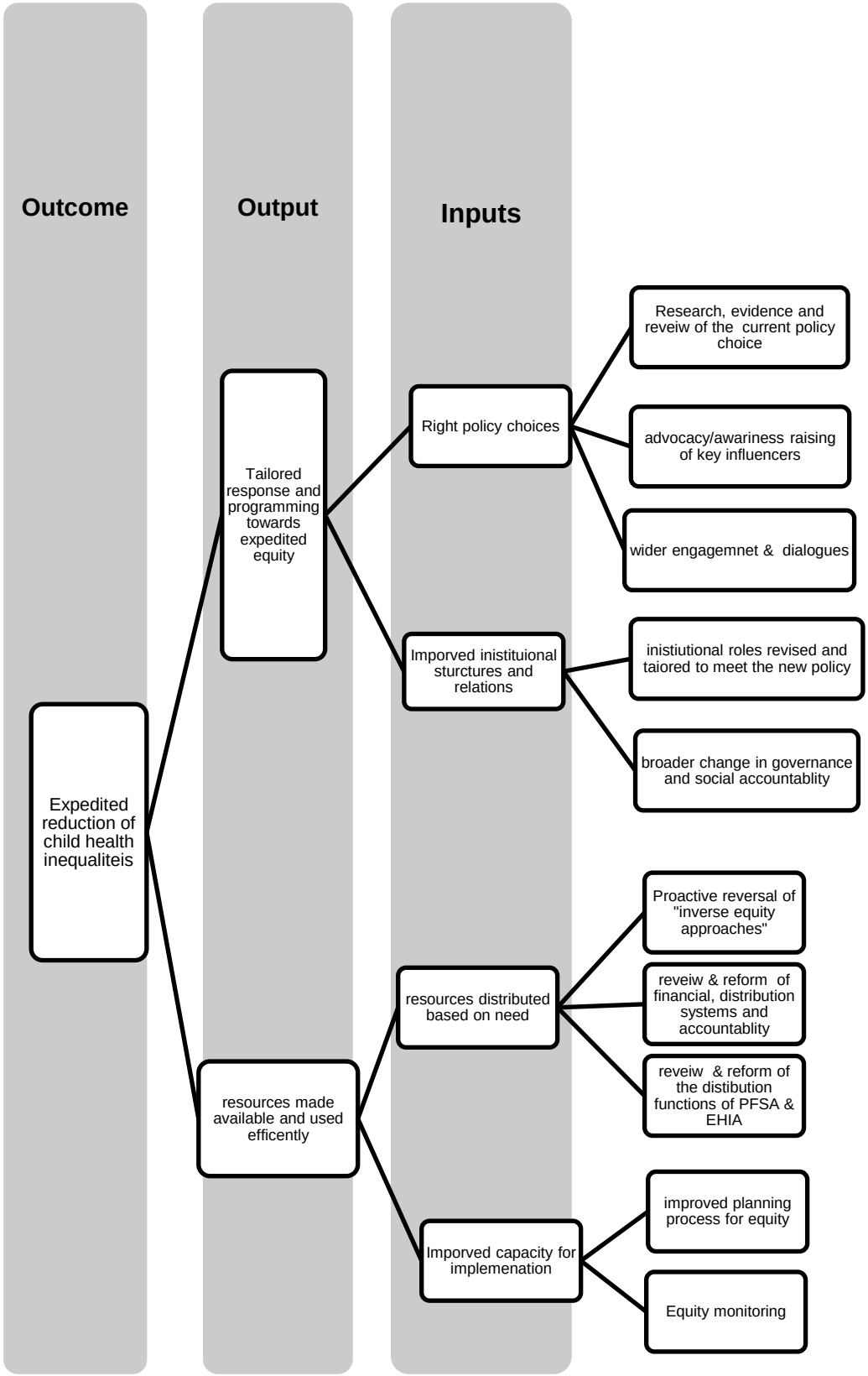


Figure 5.2 A theory of change to facilitate child health inequity reduction in Ethiopia

5.4 ADOPTING THE RIGHT POLICY OPTIONS AND TARGETS

This section proposes key actions that could assist the country to review and adopt the right type of intervention that could facilitate reduction of health/child health inequalities faster. The recommendations are built on the existing key equity policy documents.

5.4.1 Setting the policy agenda straight through collating and creating an evidence base for review of current policy choices

- **Situation**

The findings suggest that existing evidence on Ethiopia's inequality is not utilised for policy dialogue. That has led to the omission of key priority issues like wealth inequality from the current list of proposed interventions. Moreover, the findings hint that current recommendations are based on being politically correct rather than being technically sound. Some policy recommendations are also not reviewed independently. The establishment of an independent equity review commission could facilitate this process.

While enough data and research exist that describe and analyse child health inequality, more exploratory studies should be conducted. The main intention of this section is to indicate that Ethiopia needs to collate existing independent works and identify if more independent reviews are required. This could be conducted by an independent equity monitoring institute or through commissioning an independent equity review group.

The Marmot review introduced the use of independent high-quality reviews and monitoring of inequalities for inequality reduction (Marmot & Bell 2012:S4-10). Several countries opted to establish an independent commission to review and outline an equity reduction monitoring process (Goldblatt 2016:26-27; (Marmot, Allen, Bell, Bloomer, Goldblatt, & Consortium for the European Review of Social Determinants of Health and the Health Divide 2012:1012). Furthermore, working on policy makers' attitudes and knowledge has been found to influence their choice of policy (Milat, King, Bauman, Bauman & Redman 2012:582-583).

The following initiatives or activities are recommended:

5.4.1.1 Increase the evidence pool

- Establish an independent Equity Review Commission that leads the review of the existing evidence and response to propose policy alternative options that build on the EPA 2020.
- Set an attainable direct target on reduction of health inequalities. This needs to be time bound and with a clear commitment of objective reduction in the health inequality gap.
- Based on need, establish sentinel surveillance sites to monitor wealth and regional inequality in Ethiopia.
- Conduct more decomposition and advanced analysis to uncover the main causes of Ethiopian inequality.
- Conduct studies that focus on the poorest of the poor and understand qualitative and quantitative reasons for the disproportional inequality.
- Conduct a complete feasibility and political study of redistributive justice programme introduction in Ethiopia for health inequalities.
- Conduct a feasibility assessment for changing the health tier, health care delivery and supply systems to meet the socio-cultural situation of people living in the DRS, in poverty and other horizontal inequality factors.
- Conduct a collation and analysis of the existing evidence from independent sources to inform and challenge existing policy choices.
- Conduct trend analysis and update the knowledge based on latest data that will come from EHDS 2016.
- Conduct more studies to understand granular level inequalities, including studies to unpack intra-regional and horizontal inequalities in selected areas.

5.4.1.2 Disseminate and share the information among policy makers

Information should be disseminated and shared among policy makers. This could be done through broader dialogue and engagement of the affected populations; establishing a platform for policy deliberation and decision-making, and participatory and inclusive dialogue (see section 5.4.3 for detailed discussion).

5.4.2 Improve policy makers' awareness and advocate for high impact equity interventions

- **Situation**

The findings revealed that the level of awareness is at best mixed and highly concentrated at the top leadership. Policy makers' awareness of wealth inequalities and relevant causes is low.

Leaders in the lower ranks receive their information from their line managers and do not have access to independent information and debates. Policy makers and implementers do not differentiate between bad performance and systematic inequalities that come from unfair distribution of social, economic and political factors.

The study identified layers of audiences and interest groups, and this needs to be validated by formative assessments. Audience segmentation and targeting each segment with tailored messages is a high impact approach to create awareness and change behaviour. Figure 5.3 illustrates the levels of audience that need to be targeted in awareness creation and advocacy strategies.

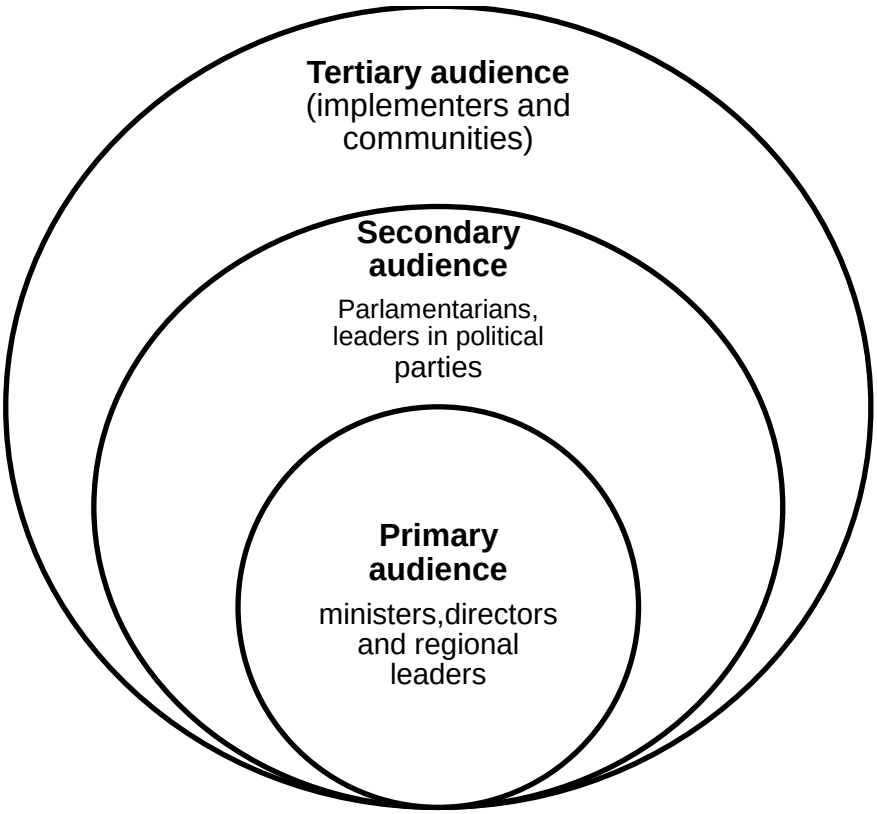


Figure 5.3 Broad audience segmentation of key influencers in improving health equity awareness and policy making

5.4.2.1 Continue to improve awareness among policy makers and implementers

The following list of initiatives or activities are recommended under this section:

- Conduct an in-depth segmentation and audience analysis that covers political leaders, parliament, political parties, health and other public service providers.
- Produce a health equity communication framework to guide a systematic roll-out of awareness and behavioural change.
- Conduct high level debates and data dissemination targeting the right segment of audience. This could include bringing in renowned international experts and health sector managers that advocate for equity.
- Roll-out radio, TV spots, billboards, social media campaigns to raise the general awareness of any available equity interventions.
- Organise international travel and experience sharing visits to countries that have successfully implemented equity interventions.
- Organise on-going training to raise key leaders' awareness.

5.4.2.2 Target advocacy for adoption of the right policy

- Conduct formative assessments to identify interest groups and influencers in equity policy setting at regional and federal level.
- Produce an advocacy plan at federal and regional level that is aware of the interest groups, their networking and relationships.
- Produce an advocacy plan that covers all the stakeholders and key interest groups.
- Lobby targeted top political leaders, their advisers and key influencers in the political parties that can provide support to the health sector.

5.4.3 Broader dialogue and engagement of the affected populations

- **Situation**

Two major issues were identified in this study: a paternalistic top-down approach and less inclusive decision-making that does not directly engage the affected populations and their constituents. This has affected the quality of communication, team work and progress in inequity reduction in Ethiopia.

There were very few open discussions on the situation and proposed solutions. Major policy choice decisions were made by a few high- level leaders. The proposed interventions are not perceived as relevant, tailored and adequate by DRS. Decisions like not addressing wealth inequalities in health have been made in a smaller circle without consulting development partners, communities and civil society.

Top-down and paternalistic approaches appear be how the work ethics and the bureaucrats function. Ethiopia needs to be open to views and create a space for policy dialogue on health and other inequalities for an expiated reduction.

The following initiatives or activities are recommended under this section:

5.4.3.1 Establish an independent broader platform for policy deliberation and decision-making platform

- Reduce the dependency on guidance from the top level of administration.
- Use an independent group (or the Health Equity Commission) to establish a wider group of decision-makers that consists of academics, civil society, representatives of the DRS, the poorest, and regional and federal leaders.
- Establish a similar panel of equity at regional level to replicate the same function and engage all frontline workers.
- Establish a webpage and database, where all the key data (from independent sources and the FMOH) are published and accessible for decision-making and further studies.
- Procure international expertise to facilitate discussion and improve the outcome of dialogues or policy documents.

5.4.3.2 Conduct participatory and inclusive dialogues

- Build on the existing opportunity of the inter-ministerial boards to advocate Health-in-All approaches in a structured way.
- Conduct regular open equity dialogue forums at least annually with the key stakeholders.
- Introduce and conduct annual equity conferences that involve researchers, public health and professional associations, civilians, media and politicians.
- Pilot and practise a bottom-up approach in policy dialogue, being cognisant of the capacity limitation at lower levels.

5.5 IMPROVING STRUCTURAL AND INSTITUTIONAL RELATIONS

5.5.1 Institutional roles revised and tailored to facilitate the implementation of the right policy choices

- **Situation**

Ethiopia has one of emerging health systems that has been able to meet MDGs. The health care system suffers from chronic under funding; operating with a per capita fund that is about 60% of the WHO recommended level.

Areas in the DRS and where the poorest Ethiopians live might not need to exactly replicate the health structures of the agrarian and urban areas. Health-in-all approaches and splitting the functions of the traditional health offices could be a way forward for expedited change.

The DRS RHBs are struggling with functions of clinical care provision, demand creation and systems building in a low budget, mobile population, very low water access, food insecurity, and instability. Key policy issues and initiatives like health care financing and insurance are not in place. This might be an indication to go into a health-in-all approach for preventive and system functions and integrate such functions with other sectors. This would give the health bureau space to focus mainly on clinical care provision.

Without arguing their effectiveness, there are structures and groups to be explored for the general development of pastoralist communities in Ethiopia. Chapter four discusses the parliamentarian group and the inter-ministerial panels.

The findings indicate that the Federal and regional governments have a complex relationship. The FMOH equity interventions are implemented through the Director of Special Health System Strengthening (DSHSS) for pastoralist, which is a complete structural oversight affecting the Ministry's ability to intervene on wealth inequalities.

5.5.1.1 Extensive review of the FMOH and other structures to increase comprehensives and efficiency

The following initiatives or activities are recommended under this section:

- Review the functions, scope and staffing of the DSHSS and the Health Promotion directorates. This might result in a major change to create a custodian of comprehensive equity interventions beyond regional inequalities.
- DRS and Federal government should review and determine whether the current type of Regional Bureaus is required or should be structured differently for the agrarian and urban regions in the face of a wide inequality.

- The review could be a step to health-in-all approaches, by which clinical service provision can be separately managed from health promotion/public health; systems building; infrastructure, along with water, governance, women, and livelihood initiatives.
- Review the role and impact of the inter-ministerial panel for pastoralist and the parliamentarian committees and recommend options to maximise their impact on health inequalities.
- Conduct benefits and impact assessments of different models of empowering and collaboration between the parties from DRS and the main leading party.
- Initiate a new health tier system for selected areas in which residents are highly mobile and chronically marginalised.

5.5.1.2 Introduce broader change in governance and social accountability and establish a working relationship that puts DRS in the driving seat

- Introduce government-wide reforms that address governance and accountability issues at DRS. These include corruption, performance management, and good governance issues.
- Produce regional equity plans through support from independent groups (which could be the equity commission or their regional structures).
- Encourage innovation and tailored responses through challenging grants.
- Engage civil societies, private sector and NGOs in hard to reach areas.

5.6 IMPROVING CAPACITY FOR EQUITY REDUCTION PROGRAMMING

- **Situation**

This section summarises a list of proposed initiatives or activities that could improve the planning and monitoring systems.

The findings from the study suggest that the Ethiopian planning, monitoring and implementation process has not succeeded in a fast reduction of inequality. The planning and monitoring process was designed to assist improving the national average values and meet the MDGs.

The FMOH keeps a data-base of service coverage reports from 1,000 districts. It attempted to establish a score card system to monitor the performance of districts. Every year, during the planning season targets were sent from the centre to regions and districts, in a top-down way and the FMOH maintained that the districts and regions adapted the targets in a bottom-up way to reach the final targets. However, this system has been not able to influence what happens at district level due to the political and institutional factors discussed in Chapter 4. The planning process is not tuned to reduce inequalities. The prioritisation process and use of donor funds for equity are challenged by a lack of analysis, scientific prioritisation and open dialogue.

Data is not visible and accessible to peripheral structures and development partners. With all the limitations of government produced data, some districts and regions are not fully aware of where they are on the gradient of inequality. The quality of data from government sources is perceived to be misleading and not complete, but the HSTP intendeds to revolutionise data use in the health system.

In order to systematically track health inequality and determinants of health, Pedrana, Pamponet, Walkeret, Costa and Rasella (2016:1-4) recommend that countries adapt key indicators proposed by the WHO in to their contexts to track inequalities. While tracking broader factors that determine health inequality is important, countries need to pilot the feasibility of tracking broader indicators before full-scale data collection (Blas, Ataguba, Huda, Bao, Rasella & Gerecke 2016:1-5).

5.6.1 Improving equity monitoring and local use of data for decisions

The following initiatives or activities are recommended under this section:

- Establish equity monitoring frameworks and systems, including the development of an extensive monitoring framework to guide the implementation of the EPA 2020.
- Establish complementary equity data sources like a research unit, a network of surveillance sites, and surveys.
- Increase data visibility at district and regional level by establishing an “equity database” which is accessible to all districts through Internet and hard copies.

- Establish or adopt a simple analytical tool that can be used by frontline workers and peripheral leaders to assist in inspecting their situation in terms of horizontal and vertical inequality.
- Implement the data revolution plan for Ethiopia and consider inequity in the process.
- Review the quality and completeness of data, indicators and safety mechanisms in the existing Health Management Information System.
- Integrate horizontal inequality indicators into the Health Management Information System.
- Establish a data-for-decision system that is focused on inequalities at local level. This could be built over the score card method.
- Decentralise the score card review and decision-making to districts, thereby engaging the administrators and other sector offices at district level.
- Continue conducting annual performance reviews of the sectors with the inclusion of presentations from independent studies.

5.6.1.1 Improving the planning process and use of scientific approaches for equity

The following initiatives or activities are recommended:

- Review the existing planning process through an equity lens. The top down and one-size-fits-all approaches need in-depth review.
- Consider using scientific planning tools to determine top equity priorities for faster equity reduction. These tools include UNICEF's EQUIST, the World Bank's analysis tool ADEPT, and others (Glassman, Chalkidou, Giedion, Teerawattananon, Tunis, Bump & Pichon-Riviere 2012:16-18).
- Engage other sectors like the Ministry of Economic Development, micro-finances, livelihoods, and others in planning interventions that target wealth inequality.
- Establish planning forums with other ministries – for planning towards Health-in-All (see institutional setting recommendations).
- Sponsor graduate studies that can help explore a development of planning process that is sound in the Ethiopian context.

5.7 RE-APPROACH NATIONAL AND LOCAL LEVEL DISTRIBUTION OF INPUTS FOR THE HEALTH SYSTEM

- **Situation**

There are two major issues regarding resources in the health sector for Ethiopia. First, Ethiopia needs to increase the total per capita expenditure by more than 100% to $86 to provide a universal coverage of primary health care (CHATAM House 2014:11). Secondly, a fairer distribution and utilisation of resources needs to be established and ensured.

The poorest and residents in the DRS receive interventions late or do not receive them at all. Health facilities and service coverage in these areas are low. These are the populations that require basic services more than the wealthier or populations living in areas with established health systems, infrastructure and social welfare. The FMOH has 5 agencies under it: The Pharmaceutical Funds and Supply Agency (PFSA); Health Insurance Agency (HIA); HIV/AIDS Prevention and Control Office (HAPCO); regulatory agency, and the Ethiopian Public Health Institute. The findings suggest that the PFSA has a non-uniform presence and limited reach to districts in DRS and marginalised communities. This affects the distribution of essential medicines that affect the survival of children.

The findings suggest that there is a perceived and real unfair distribution of inputs for health. The central government controls the distribution of the inputs like budget, HR, infrastructure and essential medicines. A change in the distribution system based on need is required to expedite the equity gap reduction. Onarheim et al (2015: 11) recommend a revision of the health budget distribution schemes in Ethiopia to facilitate equity reduction. Anselm, Lagarde and Hanson (2015:534) found that Zambia, Zimbabwe, Chile and Cambodia managed to improve health equity through applying a rational resource allocation formula (RAF). The main lesson in RAF is the need for consistent and complete application of the RAF for maximum impact. Countries like South Africa and Namibia did not bring about equitable distribution by failing either to distribute all resources including those generated at local level or by failing to apply all the components of the RAF (Anselm et al 2015:534-535).

5.7.1 Increase awareness and reverse the culture of inverse equity in the introduction of new interventions

The following initiatives or activities are recommended:

- Increase the awareness of the whole FMOH, RHB, NGOs and politicians to understand how the current trend of inverse equity is affecting the poorest and DRS.
- Enforce a “rule of thumb” for introducing new interventions based on need rather than other factors, including proximity to the centre.
- Review the tendency to provide universal coverage of everything for everyone.
- Expedite the introduction of key initiatives that were not implemented by DRS and poorest districts, including comprehensive neonatal and obstetrics care scale-up insurance, auditable pharmacies, HIV treatment, health promotion models at household and village level.

5.7.2 Review and reform the distribution functions of budget and medical supplies with a parallel increment in accountability, transparency and absorption capacity at DRS and districts populated with the poorest

The following initiatives or activities are recommended:

- Establish a resource budgeting index that is based on details of health status indicators as a main criterion rather than population size only. This system should also enable accounting for the high unit cost of creating demand and serving marginalised populations.
- Regional and federal government should introduce tight control in reducing misuse of funds and pilferage of essential medicines in areas where they are most wanted.
- Strengthen planning, execution and financial systems to increase the absorption capacity of DRS and districts where health resources are more required.
- Establish a system to encourage civil society and donors to fund programmes in DRS and for the poorest.

- Development partners and government should establish a system of prioritisation of all aid resources for the poorest and people living in DRS.
- Independently review the impact of unfair distribution of major structures and institutes.
- Conduct incidence benefit studies to determine why the poorest of the poor have the worst child health status and outcome.
- Conduct geographic distribution assessments on the impact of the current essential medicines supply system.
- Understand the effect of conditions set by the PFSA and their impact on essential drug flow to remote sites where the capacity of health workers and the availability of communication infrastructure is very limited.
- Reform the PFSA to enable it to serve the poorest and DRS at a cost that can be higher than the average.

5.8 CONCLUSION

This chapter presented the results of the second phase of the study, which was the production of a guide to facilitate the reduction of child health inequality in Ethiopia. The chapter summarised the process, the heuristic arguments and theoretical foundations of the recommendations. Ethiopia needs a change in strategy, a change in institutional set-up, improved capacity; and redistribution of resources for a facilitated reduction

The guidelines of the guide are built on four prongs: adopting the right policy; improving the quality of participation; capacity building and distribution of resources based on need. Major new initiatives are proposed for consideration by policy makers. These include establishing an independent commission for equity; reviewing current structures; establishing planning and monitoring systems to fit equity reduction, and adopting known high impact equity interventions. The guide will be available for future use to researchers, the public, policy makers and donors.

CHAPTER 6

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

This chapter concludes the study, briefly discusses the conclusions from the two phases of the study; makes recommendations for programme development and improvement; discusses the contribution and limitations of the study, and provides the researcher's personal reflection.

6.1.1 Conclusions from Phase 1

This study concluded that child health and broader health inequalities are very important challenges confronting Ethiopia. The findings indicate that wealth inequality in health is probably the most important dimension that needs urgent attention. Ethiopia needs to change its structures; policy; resource allocation and decision-making processes. It shall consider the introduction of high impact interventions like distributive justice and health in all approaches to expedite a reduction in child health inequalities.

The level of awareness among policy makers was found to be mixed at best, but improving starting from a low base. While there is a politically driven motivation to reduce health inequalities, the how and technical approaches are not clear, incomplete and developed by top leaders. The dynamism of the federal state, the interest of different political and technical groups should be reconsidered in the development of policy and detailed guidelines.

Chronic unfair distribution of political, economic and social resources and services including health system played an important role in the existing inequality. Policy makers tend to reduce the effect of these social determinants led divide in to a simple variation from the performance of various health systems that serve different segments of the population. The participants reported unfair distribution of resources and inverse equity exacerbated the chronic geographic health inequalities.

The progress towards reduction of health inequality in Ethiopia is in early stage and non-satisfactory. Lack of relevant health policy that acknowledges the effect of wider determinants; distribution of resources; institutional set-ups and relations, coupled with a general lack of budget, planning and monitoring tools have affected progress in the reduction of health inequality in Ethiopia.

6.1.2 Conclusions from Phase 2

Ethiopians are not equal. Fostering and providing equal health among an unequal population is a complex task. The main conclusion was that Ethiopia would not go far to invest on supply side of the health systems and focus the performance/commitment of district and regional leaders at DRS. Ethiopia needs to invest in the bigger inequalities, empower the poor and marginalised through demand-side redistributive justice. The structures and systems that helped to achieve the MDGs now need to turn to face inequalities.

The Ethiopian government recently renewed its commitment to reducing health inequalities. New structures have been established and the first Equity Action Plan has been drafted. However, the response was not fully participatory but based on political drives, and did not utilise independent data sources. The study found signs of denialism and rejection of recognised equity interventions that are primarily distributive justice. The new action plan is largely an attempt to scale-up what has worked in urban and agrarian area to pastoralists, with complete oversight of wealth inequalities.

Policy documents like the Equity Action Plan, Health Transformation Plan and Vision 2030 are great starting points for this guide.

An illustrative guide has been produced to add to the debates on how Ethiopian child health inequality can be reduced faster. The guide is based on the findings of this study and global best practices. The recommendations focus on adopting the right policy and policy process; changing structures, and changing the approach to the distribution of resources and capacity building.

6.2 RECOMMENDATIONS

6.2.1. Recommendations for policy and programming

Based on the findings of the study, the researcher makes the following recommendations for programmatic improvement.

- Establish an independent equity commission to review the situation anew and propose interventions;
- Develop an advocacy and BCC framework targeting policy makers and politicians to raise behaviours and facilitate the adoption of the right policy choices.
- Change structures and roles inside the FMOH and RHBs to enable rapid introduction and implementation of equity interventions;
- Review the scope of the FMOH, RHB and agencies like the PFSA;
- Adopt pro-poor demand-side interventions like health equity, and conditional or unconditional cash transfer;
- Revise the budgeting and drug distribution approach as well as the planning and equity monitoring system;
- Consider Health-in-All approaches in the DRS, which might change the architecture of the RHB and other sectors. The regional government, RHB and district offices need to review how the role in clinical care, preventive and underlying factors related with health could be shared with other sectors;

6.2.2 Recommendation for further studies

The following list of areas of research are recommended, a long list of proposed area of studies is provided under *5.4.1.1*.

- Establish a prospectively designed equity monitoring surveillance sites;
- Conduct incidence-benefit analysis of the health expenditure to determine the trend of distribution of public resources in health;
- Conduct more qualitative and health systems studies in the DRS to understand the challenges.

6.3 LIMITATIONS

The researcher found the following limitations of the study. The study was qualitative, which means that quantitative evidence shall not be sought from it. The study is not built on a rigorous epidemiological design to determine the cause of disparities in mortality or other conditions. Such information could have been important to add more evidence on the underlying causes of the inequality in Ethiopia. However, cohort studies were not needed to conclude that social determinants of health are the major underlying factors of health disparities in the country.

This study might have been challenged by a “police man” or other similar effects of the tendency to be politically correct by the informants. Inequality by place of residence, which is linked with ethnicity and religion in Ethiopia, is very delicate. The data collection and analysis used triangulation and coding at abstract level to mitigate this potential limitation.

Finally, given the complexity of the issue and lack of previous in-depth exploration of policy and health inequality, other areas that need in-depth research were beyond the scope of the study.

6.4 CONTRIBUTION OF THE STUDY

The study contributed to the role of scientific studies of policy and health inequality, and towards reaching UHC and reduction of child health inequality in Ethiopia.

This study adds to the knowledge of inequality in health policy in Africa. It applied key theoretical frameworks in health policy studies and inequality reviews. It adds a qualitative view from policy makers to the growing descriptive analysis of health inequalities in Ethiopia and LMICs. In addition, the study provided unique conceptual frameworks to be used and investigated in future studies.

The study took the innovative approach of Critical Interpretive Synthesis to code and analyse interview data, policy documents and literature. The use of CIS in equity and policy researching in Africa is a step forward and major contribution to include the design of similar studies.

Moreover, the findings in Phase 1 and recommendations in Phase 2 directly contribute to the evidence base and equity reduction works in Ethiopia. The study is another independent source of evidence for the government, the public and development partners. The proposed major changes in the guidelines are based on global experiences and heuristic arguments from the study. It challenges policy positions that are considered “sacred” form the perspective of empirical evidence.

The findings and recommendations will be disseminated among civil society, government offices and development partners. The contents can be used in policy dialogue and programming to reduce child health inequalities faster. This could assist Ethiopia to attain its Health Sector Transformation and Health Care Vision 2030 goals for UHC.

6.5 CONCLUDING REMARKS

Addressing health inequalities in Ethiopia should be one of the key priorities of the health sector and the broader political leadership. While working towards UHC in Ethiopia, stakeholders need to focus on inequality, set clear targets and address broader issues.

As in many countries, policy making is affected by the knowledge of policy makers, different interest groups, economic priorities and political relations. Health inequality and health are dependent on broader social determinants. Addressing empowerment, basic infrastructure inequality and the effect of proximity to power centres is required to expedite change in child health inequality in Ethiopia.

Personal reflection

Irrespective of my personal belief in competition, winners and losers in life, I stand against unfair disparities in health of children. This is an ongoing concern of mine that follows almost twenty years of working with children and adults who are marginalised.

This study has been part of my dream to impact more and understand humanity more. I wanted to stretch bigger than public health and go behind what determines disparities in public health.

My eyes always get wet whenever I go out and visit health programmes in Ethiopia and for that matter in Africa. All the children in Addis Ababa or other regions, presented as “relatively privileged” in the study, deserve much better care. I don’t believe the situation in most parts of Africa is much different.

My work at policy level made me ask myself, “How can Ethiopia provide the best attainable child health for all Ethiopians in a fair way?” I don’t want to stop the construction of a paediatric cancer treatment centre; I want to make sure poor and marginalised children in Africa get ORS and can get cancer treatment when they need or want it.

If I were given the chance to redo this study, I probably would not go the same way. I do not feel accomplished as always, but this was tough work on a delicate issue. I was even more impressed by most of the participants, who demonstrated a high level of professional integrity, while discussing this sensitive issue with me. Readers cannot and will not see most of the best quotes I received because I agreed not to share them with anyone.

This report will be re-written in fewer pages. I am sure many key people will read it. Some will disagree, some will feel this is just another of my crazy thinking, but I know that ultimately, this study will improve the lives of Ethiopians.

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ANNEXURES

ANNEXURE A

Ethical clearance Certificate

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

HSHDC/304/2014

Date:	30 January 2014	Student No:	5333-989-4
Project Title:	Equal access to life saving child health care: An equity lens for Ethiopia.		
Researcher:	Kassa Mohammed Abbe		
Degree:	D Litt et Phil	Code:	DPCHS04
Supervisor:	Prof BL Dolamo		
Qualification:	D Cur		
Joint Supervisor:	-		

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

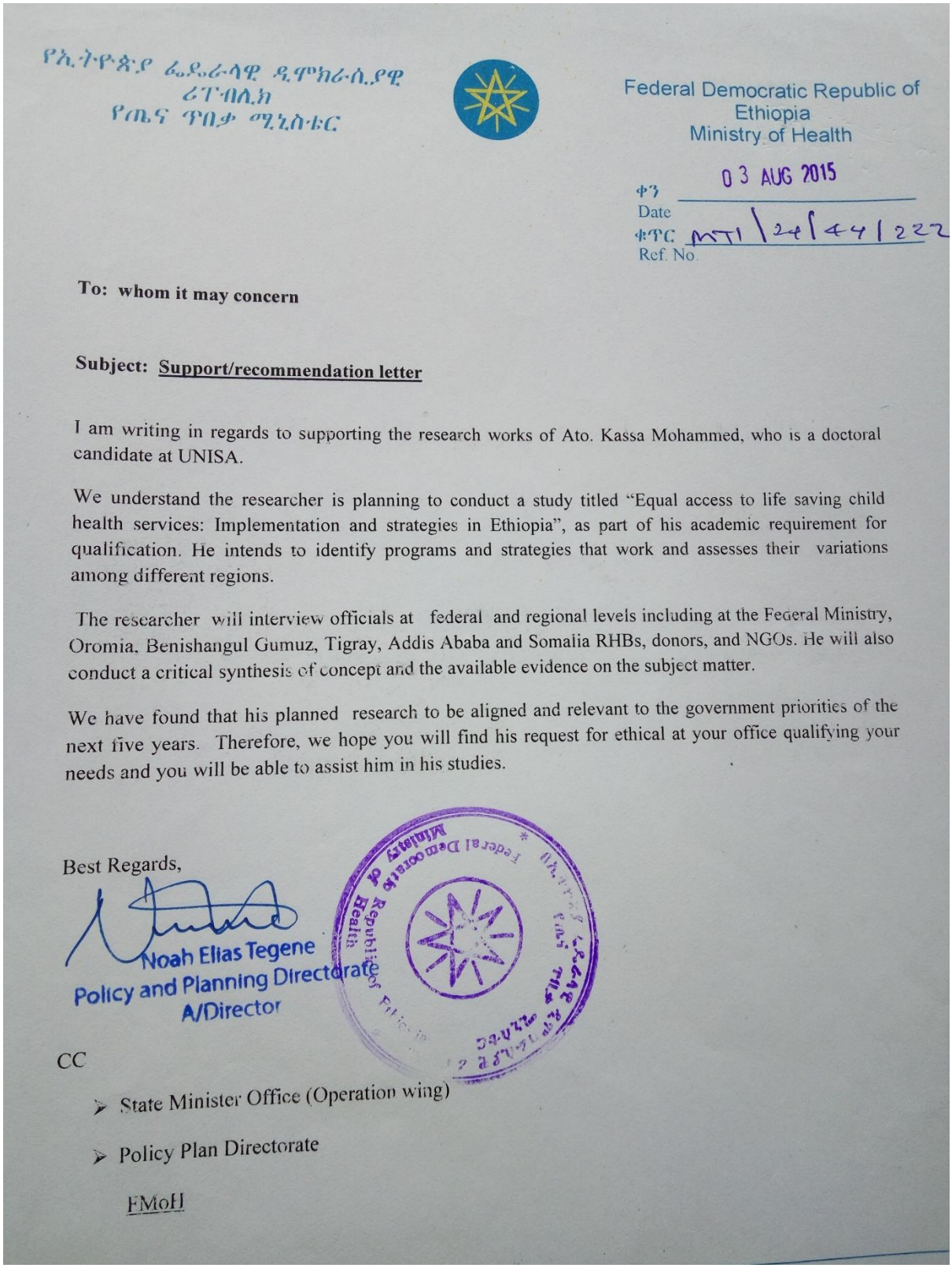
Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Prof MM Molaki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE B

Letter of permission for Federal Ministry of Health



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Federal Democratic Republic of
Ethiopia
Ministry of Health

ቀን 03 AUG 2015
Date
ቁጥር MTI/24/44/222
Ref. No.

To: whom it may concern

Subject: Support/recommendation letter

I am writing in regards to supporting the research works of Ato. Kassa Mohammed, who is a doctoral candidate at UNISA.

We understand the researcher is planning to conduct a study titled "Equal access to life saving child health services: Implementation and strategies in Ethiopia", as part of his academic requirement for qualification. He intends to identify programs and strategies that work and assesses their variations among different regions.

The researcher will interview officials at federal and regional levels including at the Federal Ministry, Oromia, Benishangul Gumuz, Tigray, Addis Ababa and Somalia RHBs, donors, and NGOs. He will also conduct a critical synthesis of concept and the available evidence on the subject matter.

We have found that his planned research to be aligned and relevant to the government priorities of the next five years. Therefore, we hope you will find his request for ethical at your office qualifying your needs and you will be able to assist him in his studies.

Best Regards,

Noah Elias Tegene
Policy and Planning Directorate
A/Director

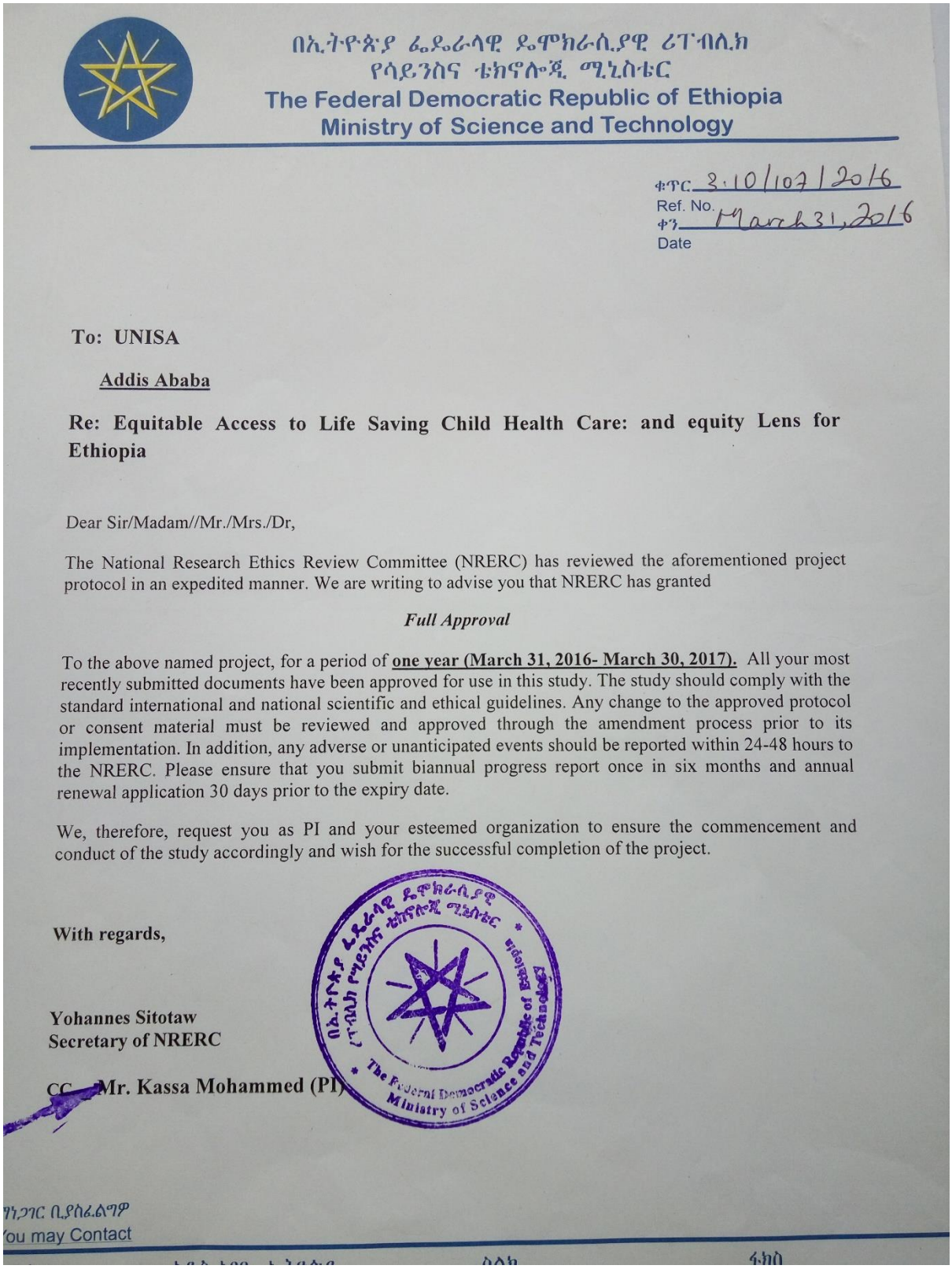
CC

- State Minister Office (Operation wing)
- Policy Plan Directorate

FMoH

ANNEXURE C

Ethical clearance and support letter from Ethiopian Science and Technology



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የሳይንስና ቴክኖሎጂ ሚኒስቴር
The Federal Democratic Republic of Ethiopia
Ministry of Science and Technology

ቁጥር 3:10/107/2016
Ref. No.
ቀን March 31, 2016
Date

To: UNISA

Addis Ababa

Re: Equitable Access to Life Saving Child Health Care: and equity Lens for Ethiopia

Dear Sir/Madam//Mr./Mrs./Dr,

The National Research Ethics Review Committee (NRERC) has reviewed the aforementioned project protocol in an expedited manner. We are writing to advise you that NRERC has granted

Full Approval

To the above named project, for a period of **one year (March 31, 2016- March 30, 2017).** All your most recently submitted documents have been approved for use in this study. The study should comply with the standard international and national scientific and ethical guidelines. Any change to the approved protocol or consent material must be reviewed and approved through the amendment process prior to its implementation. In addition, any adverse or unanticipated events should be reported within 24-48 hours to the NRERC. Please ensure that you submit biannual progress report once in six months and annual renewal application 30 days prior to the expiry date.

We, therefore, request you as PI and your esteemed organization to ensure the commencement and conduct of the study accordingly and wish for the successful completion of the project.

With regards,

Yohannes Sitotaw
Secretary of NRERC

CC Mr. Kassa Mohammed (PI)

ማነጋገር ቢያስፈልግዎ
You may Contact

ANNEXURE D

Consent form – key informant interview

Study Title: Equal access to life saving child health care: an equity lens for Ethiopia

A brief description: This is a qualitative study that aims to understand and propose solution to reduce variation in child mortality in Ethiopia. Data is collected through in-depth interviews; each interview takes 30-40 minutes. The key stakeholders to be involved in this key informant interview includes but not limited to: Directorate generals, Case team leaders in the Federal Ministry of Health and regional health offices, program managers in UN, donor group members that work on maternal and child health, selected health system administrators. Participants and their institutions identity will be protected; all data collected will only be accessed by the investigator only. Data will be stored in safe environment; all row data will be destroyed after analysis. The analysis and dissemination of result will be technically supported by the University of South Africa (Unisa). Ethical clearance to have been attained from Unisa and Ethiopian Science and technology, please refer the attached evidence. This study is part doctoral study by the investigator at Unisa. If you agree, tape recorders will be used to record discussions.

Investigator's name and contact details:

Kassa Mohammed Abbe
Email: 53339894@mylife.unisa.ac.za
Phone: +251911485690

I have read the above information concerning this study [or have understood the verbal explanation] and I understand what will be required of me and what will happen to me if I take part in it.

My questions concerning this study have been answered by Kassa Mohammed Abbe.

I understand that at any time I may withdraw from this study without giving a reason and without being affected.

I, _____, agree to take part in this study.

I DO / DO NOT (please circle one) agree to quotations from my participation in the study to be included anonymously in reports about the study.

Signed ……. Date ……..

I DO / DO NOT (please circle one) agree to get my interview recorded on tape for the purpose of transcription only.

ANNEXURE E

Interview guide for government staff

Intro: Many thanks for agreeing to take part in this interview; your view on the subject matter will be invaluable. This interview will stay for about 45 minutes. If you agree, we will have a short tea break at the end of this discussion.

Grand Tour Questions:

In your view, what can be an example of the best attainable child health care service provision in Ethiopia today?

Probe: by types of services like emergency and comprehensive obstetrics, skilled birth, immunization and treatment of sick child

Search for examples in by residential areas: in urban and rural context

Facilitation Questions by Theme and policy analysis frameworks

1. Idea

Theme 1: Awareness, Inequality versus inequity (fairness and right)

- How do you describe the variation in child health care and mortality rate difference among different regions and wealth groups of Ethiopia?
  Read out a line of description on the current inequality (mainly by wealth and place of residence) in Ethiopia, if the interviewee is not well aware of the facts
- What types of disparities in health do you think are avoidable? What about child mortality and health disparities in Ethiopia?
- Follow up: *why? What do you think makes reduction/elimination of this disparity unavoidable?*
- Which one is very important for Ethiopia currently- increasing coverage or improving equity? Given the limited budget for health which one of the two should be a priority for Ethiopia? *Why?*

- Do you believe the country has the resources to make child mortality rate between rural and urban; the poorest and the richest; and the DRS and non-DRS to be similar? *Why*

Theme 2: perception on the causes

Perceived and probable drivers of inequality/inequity

- What do you think are the factors that caused these differences among Ethiopians in child health over a long period of time?
  Probe: the effect of health systems, broader social determinants of health
- What kind of populations do you think don't use child health services like *(skilled birth attendance, immunisation)* probe poor vs rich, urban vs rural , DRS vs non-DRS
- How does the health care system reduce or increase inequality in Ethiopia? Probe: Inequality by Wealth and region

2. Institutional factors

Theme 3: organizational readiness, leadership and commitment

- What guidelines/strategies do you have to reduce regional or urban rural variation in providing life-saving child health care services?
- What is the planning process at your office? How do you address the disparity in maternal and child health clinical services coverage Probe: (between rich/poor), (urban/rural) , DRS/non-DRS
  By Service types: emergency and comprehensive obstetrics, skilled birth and treatment of sick child
- Who leads equity reduction interventions in your office? (Is it a team? Unit? How does its structure look like?)
- How have you addressed the underserved poor and rural community in your strategic plan (HSTP)?
- Given the decentralized powers to districts, how does the Regional Health Bureau (RHB) and districts operate in terms of reducing and monitoring disparities of service coverage?

- Please, use this question For Federal level interviews - how do you describe the relation between your office and RHB in terms of reducing regional disparities of coverage and mortality?

Theme 4: awareness on inverse equity and health systems

- What targeted approaches/interventions do you use to reach people living in underserved woredas and regions? Remote, food unsecured, DRS
- Please describe the process of budgeting and factors that determine budget distribution among regions and the amount that goes to the poorest? *For Federal- level Interviews*
- What institutional set up do you have to support the distribution of child health drugs and commodities to remote health facilities?
- What is the role of fee retention, waive and exemption from fee in worsening or reducing this inequality?
- Follow up the same question for the health extension program and community mobilization techniques?

3. Interest/politics (to be applied at a higher regional and political level)

Theme 5: the political drives and interest

- What can be the political factors that you think play important role to improve awareness and response on health inequality among GoE?
- What are the Growth and Transformation Plan II (GTP II)'s major government planned interventions to reduce income inequality? Unemployment?
- How is the government political policy and structures influence inequity in child/ health?
- How is fairness being executed in the distribution of the social determinates of health? (Agricultural productivity, Infrastructure, poverty reduction, good governance and budgeting)

4. The policy/solution

Theme 6: Attitude and values in appraising equity interventions

- How do you think the poorest and underserved can be served equally as the others?
- What targeted programs do you have that are focused on the poorest/ The Developing Regional States (DRS) regions?
- Health Equity Funds is a new model in Ethiopia that provides funds to the poorest section of communities to cover the cost of transportation, lodging and medical cost to reduce inequality fast. *What do you think about this initiative? How can your region or Ethiopia implement this?*
- CCT is a conditional transfer of cash to the poorest based on conditions that they use child health and related care services. *What do you think about this initiative? How can your region or Ethiopia implement this?*
- Finally, what steps do you think are required for the country to introduce effective inequality reduction programs (poor vs rich) and regional disparities?

Many thanks for your time that was very helpful. We have finished and I might want to call or see you for further brief follow up discussion

Interview guide for development partners

Intro: Many thanks for agreeing to take part in this interview; your view on the subject matter will be invaluable. This interview will stay for about 45 minutes. If you agree, we will have a short tea break at the end of this discussion.

Grand Tour Questions:

In your view, what can be an example of the best attainable child health care service provision in Ethiopia today?

Facilitation Questions by Theme and policy analysis frameworks

1. Idea

Theme 1: Awareness, Inequality versus inequity (fairness and right)

- How do you describe the variation in child health care and mortality rate difference among different regions and wealth groups of Ethiopia?
  Read out a line of description on the current inequality (mainly by wealth and place of residence) in Ethiopia, if the interviewee is not well aware of the facts
- What is your assessment on GoE's level of understanding and readiness to address child health inequality in Ethiopia? Probe: denial, aware, open and interested, blocking discussion
- Is/was the current child mortality and health disparities avoidable/preventable in Ethiopia?
- Which one is very important for Ethiopia currently- increasing coverage or improving equity? *Why?*
- What do you think the role of development partners and NGOs shall be to reduce child health inequality in Ethiopia?

Theme 2: perception on the causes

Perceived and probable drivers of inequality/inequity

- What do you think are the factors that caused these differences among Ethiopians in child health over a long period of time?
- What kind of populations do you think don't use child health services like *(skilled birth and immunisation*) probe poor vs rich, urban vs rural , DRS vs non- DRS
- Why do you think people in DRS and the poorest gets served the least?

2. Institutional factors

Theme 3: organizational readiness, leadership and commitment

- In your view, what is the level of GoE's commitment and leadership to reduce health inequality in your view? Please give some examples.
- What guidelines/strategies does the country have to reduce regional or urban rural variation in providing life-saving child health care services?
- How does the current planning process in Ethiopia (both for HSTP and annual planning) is helping to address the disparity MCH services coverage? – the use of data and targeted interventions
- Who leads equity reduction interventions in FMOH or in other sectors of the GoE? (is it a team? Unit? What does it structure looks like?)
- What do you think is the impact of power decentralization on leading equity reduction? (At Federal, regional and district level)
- Where do you think your organization's place is in this process of reducing inequality?

Theme 4: awareness on inverse equity and health systems

- How do you think major donor funded child health programs (including the MDG) have affected child health inequality in Ethiopia?
- The introduction of new/additional services and approaches in already well-functioning health systems has been the characters of donor funded programs- what are the effects of this approach on inequality?
- Can you comment how the budgeting process and factors that determine budget distribution affects inequality? probe by region and wealth qunitle
- Why are we having attrition of health workers in remote areas and regions?

- How do you think the current system (drug distribution, HEP/community mobilization and fee waiver system) is increasing or reducing child health inequality?
- What can be the political factors that you think play important role to improve awareness and response on health inequality among GoE?

3. The policy/ Solution

Theme 6: Attitude and values in appraising equity interventions

- Why do you think GoE has not developed a clear strategy to address health inequality? (an issue of awareness, political conditions, resources, capacity)
- How do you think targeted programming can be introduced in Ethiopia to reduce inequality?
- Health Equity Funds is a new model that provides funds to the poorest section of communities to cover the cost of transportation, lodging and medical cost to reduce inequality fast. *What do you think about this initiative? How can your region or Ethiopia implement this?*
- CCT is a conditional transfer of cash to the poorest based on conditions that they use child health and related care services. *What do you think about this initiative? How can your region or Ethiopia implement this?*
- What kind of resources can be made available by your organization to reduce health inequality?
- Finally, what steps do you think are required for the country to introduce effective inequality reduction programs (poor vs rich) and regional disparities?

Many thanks for your time that was very helpful. We have finished and I might want to call or see you for further brief follow up discussion

ANNEXURE F

Letter from the editor

Cell/Mobile: 073-782-3923

53 Glover Avenue
Doringkloof
0157 Centurion

21 July 2017

TO WHOM IT MAY CONCERN

I hereby certify that I have edited Kassa Mohammed Abbe's doctoral dissertation, **Equitable access to life-saving child health care: an equity lens for Ethiopia**, for language and content.

IM Cooper

Iauma M Cooper
192-290-4